THE

Horticulturist,

AND

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ONE of the most striking proofs of the progress of refinement, in the United States, is the rapid increase of taste for ornamental gardening and rural embellishment in all the older portions of the northern and middle states.

It cannot be denied, that the tasteful improvement of a country residence is both one of the most agreeable and the most natural recreations that can occupy a cultivated mind. With all the interest, and, to many, all the excitement of the more seductive amusements of society, it has the incalculable advantage of fostering only the purest feelings, and, (unlike many other occupations of business men,) refining, instead of hardening the heart.

The great German poet, GOETHE, says—

"Happy the man who hath escaped the town,
Him did an angel bless when he was born."

This apostrophe was addressed to the devotee of country life as a member of a *class*, in the old world, where men, for the most part, are confined to certain walks of life by the limits of caste, to a degree totally unknown in this country.

With us, country life is a leading object of nearly all men's desires. The wealthiest merchant looks upon his country seat as the best ultimatum of his laborious days in the counting-house. The most indefatigable statesman dates, in his retirement, from his "Ashland," or his "Lindenwold." WEBSTER has his "Marshfield," where his scientific agriculture is no less admirable than his profound eloquence in the Senate. TAYLOR'S well ordered plantation is not less significant of the man, than the battle of Buena Vista. WASHINGTON IRVING'S cottage, on the Hudson, is even more poetical than any chapter of his Sketch Book; and COLE, the greatest of our landscape painters, had his rural home under the very shadow of the Catskills.

This is well. In the United States, nature, and domestic life, are better than society, and the manners of towns. Hence all sensible men gladly escape, earlier or later, and partially or wholly, from the turmoil of the cities. Hence, the dignity and value of country life is every day augmenting. And hence the enjoyment of landscape or ornamental gardening—which, when in pure taste, may properly be called *a more refined kind of nature*,—is every day becoming more and more widely diffused.

Those who are not as conversant as ourselves with the statistics of horticulture and rural architecture, have no just idea of the rapid multiplication of pretty cottages

and villas in many parts of North America. The vast web of railroads which now interlaces the continent, though really built for the purposes of trade, cannot wholly escape doing some duty for the Beautiful as well as the useful. Hundreds and thousands, formerly obliged to live in the crowded streets of cities, now find themselves able to enjoy a country cottage, several miles distant,—the old notions of time and space being half annihilated; and these suburban cottages enable the busy citizen to breathe freely, and keep alive his love for nature, till the time shall come when he shall have wrung out of the nervous hand of commerce enough means to enable him to realize his ideal of the "retired life" of an American landed proprietor.

The number of our country residences which are laid out, and kept at a high point of ornamental gardening, is certainly not very large, though it is continually increasing. But we have no hesitation in saying that the aggregate sum annually expended in this way for the last five years, in North America, is not exceeded in any country in the world save one.

England ranks before all other countries in the perfection of its landscape gardening; and enormous, almost incredible sums have been expended by her wealthier class upon their rural improvements. But the taste of England is, we have good reasons for believing, at its maximum; and the expenditure of the aristocracy is, of late, chiefly devoted to *keeping up* the existing style of their parks and pleasure grounds. In this country, it is quite surprising how rapid is the creation of new country residences, and how large is the aggregate amount continually expended in the construction of houses and grounds, of a character more or less ornamental.

Granting all this, it cannot be denied that there are also, in the United States, large sums of money—many millions of dollars—annually, most unwisely and injudiciously expended in these rural improvements. While we gladly admit that there has been a surprising and gratifying advance in taste within the last ten years, we are also forced to confess that there are countless specimens of *bad taste*, and hundreds of examples where a more agreeable and satisfactory result *might have been attained at one-half the cost.*

Is it not, therefore, worth while to inquire a little more definitely what are the obstacles that lie in the way of forming satisfactory, tasteful and agreeable country residences?

The common reply to this question, when directly put in the face of any signal example of failure, is—"Oh, Mr. —— is a man of no *taste!*" There is, undoubtedly, often but too much truth in this clean cut at the *æsthetic* capacities of the unlucky improver. But it by no means follows that it is always true. A man may have taste, and yet, if he trusts to his own powers of direction, signally fail in tasteful improvements.

We should say that two grand errors are the fertile causes of all the failures in the rural improvements of the United States at the present moment.

The first error lies in supposing that good taste is a natural gift, which springs heaven-born into perfect existence—needing no cultivation or improvement. The second is in supposing that taste alone is sufficient to the production of extensive or complete works in architecture or landscape gardening.

A lively *sensibility to the Beautiful*, is a natural faculty, mistaken by more than half the world for good taste itself. But good taste, in the true meaning of the term,

or, more strictly, correct taste, only exists where sensibility to the Beautiful, and good judgment, are combined in the same mind. Thus, a person may have a delicate organization, which will enable him to receive pleasure from every thing that possesses grace or beauty, but with it so little power of discrimination as to be unable to select among many pleasing objects, those which, under given circumstances, are the most beautiful, harmonious, or fitting. Such a person may be said to have natural sensibility, or fine perceptions, but not good taste; the latter belongs properly to one who, among many beautiful objects, rapidly compares, discriminates, and gives due rank to each, according to its merit.

Now, although that delicacy of organization, usually called taste, is a natural gift, which can no more be acquired than hearing can be by a deaf man, yet, in most persons, this sensibility to the Beautiful may be cultivated and ripened into good taste by the study and comparison of beautiful productions in nature and art.

This is precisely what we wish to insist upon, to all persons about to commence rural embellishments, who have not a cultivated or just taste; but only sensibility, or what they would call a natural taste.

Three-fourths of all the building and ornamental gardening of America, hitherto, have been *amateur* performances — often the productions of persons who, with abundant natural sensibility, have taken no pains to cultivate it and form a correct, or even a good taste, by studying and comparing the best examples already in existence in various parts of this or other countries. Now the study of the best productions in the fine arts is not more necessary to the success of the young painter and sculptor than that of buildings and grounds to the amateur or professional improver, who desires to improve a country residence well and tastefully. In both cases comparison, discrimination, the use of the reasoning faculty, educate the natural delicacy of perception into a taste, more or less just and perfect, and enable it not only to arrive at Beauty, but to select the most beautiful for the end in view.

There are at the present moment, without going abroad, opportunities of cultivating a taste in landscape-gardening, quite sufficient to enable any one of natural sensibility to the Beautiful, combined with good reasoning powers, to arrive at that point which may be considered good taste. There are, indeed, few persons who are aware how instructive and interesting to an amateur, a visit to all the *finest* country residences of the older states, would be at the present moment. The study of books on taste is by no means to be neglected by the novice in rural embellishment; but the practical illustrations of different styles and principles, to be found in the best cottage and villa residences, are far more convincing and instructive, to most minds, than lessons taught in any other mode whatever.

We shall not, therefore, hesitate to commend a few of the most interesting places to the study of the tasteful improver. By the expenditure of the necessary time and money to examine and compare thoroughly such places, he will undoubtedly save himself much unnecessary outlay; he will be able to seize and develop many beauties which would otherwise be overlooked; and, most of all, he will be able to avoid the exhibition of that crude and uncultivated taste, which characterises the attempts of the majority of beginners,—who rather know how to *enjoy* beautiful grounds than how to go to work to *produce* them.

For that species of suburban cottage or villa residence which is most frequently

within the reach of persons of moderate fortunes, the environs of Boston afford the finest examples in the Union. Averaging from five to twenty acres, they are usually laid out with taste, are well planted with a large variety of trees and shrubs, and, above all, are exquisitely kept. As a cottage ornée, there are few places in America more perfect than the grounds of Col. PERKINS, or of THOS. LEE, Esq., at Brookline, near Boston. The latter is especially remarkable for the beauty of the lawn, and the successful management of rare trees and shrubs, and is a most excellent study for the suburban landscape-gardener. There are many other places in that neighborhood abounding with interest; but the great feature of the gardens of Boston lies rather in their horticultural than their artistical merit. In forcing and skillful cultivation, they still rank before any other part of the country. Mr. CUSHING's residence, near Watertown, has long been celebrated in this respect.

An amateur who wishes to study trees, should visit the fine old places in the neighborhood of Philadelphia. A couple of days spent at the *Bartram Garden*, the *Hamilton Place*, and many of the old estates bordering the Schuylkill, will make him familiar with rare and fine trees, such as *Salisburias*, *Magnolias*, *Virgilias*, etc., of a size and beauty of growth that will not only fill him with astonishment, but convince him what effects may be produced by planting. As a specimen of a cottage residence of the first class, exquisitely kept, there are also few examples in America more perfect than Mrs. CAMAC's grounds, four or five miles from Philadelphia.

For landscape gardening, on a large scale, and in its best sense, there are no places in America which compare with those on the east bank of the Hudson, between Hyde Park and the town of Hudson. The extent of the grounds, and their fine natural advantages of wood and lawn, combined with their grand and beautiful views, and the admirable manner in which these natural charms are heightened by art, place them far before any other residences in the United States in picturesque beauty. In a strictly *horticultural* sense, they are, perhaps, as much inferior to the best places about Boston as they are superior to them in the beauty of landscape gardening and picturesque effect.

Among these places, those which enjoy the highest reputation, are *Montgomery Place*, the seat of Mrs. EDW'D LIVINGSTON, *Blithewood*, the seat of R. DONALDSON, Esq., and *Hyde Park*, the seat of W. LANGDON, Esq. The first is remarkable for its extent, for the wonderful variety of scenery—wood, water, and gardenesque—which it embraces, and for the excellent general keeping of the grounds. The second is a fine illustration of great natural beauty—a mingling of the graceful and grand in scenery,—admirably treated and heightened by art. Hyde Park is almost too well known to need more than a passing notice. It is a noble site, greatly enhanced in interest lately, by the erection of a fine new mansion.

The student or amateur in landscape gardening, who wishes to examine two places as remarkable for breadth and dignity of effect as any in America, will not fail to go to the *Livingston Manor*, seven miles east of Hudson, and to *Rensselaerwyck*, a few miles above Albany, on the eastern shore. The former has the best kept and most extensive lawn in the Union; and the latter, with five or six miles of gravelled walks and drives, within its own boundaries, exhibits some of the cleverest illustrations of practical skill in

laying out grounds, that we remember to have seen.*

If no person, about to improve a country residence, would expend a dollar until he had visited and carefully studied, at least *twenty places* of the character of these which we have thus pointed out, we think the number of specimens of bad taste, or total want of taste, would be astonishingly diminished. We could point to half a dozen examples within our own knowledge, where ten days spent by their proprietors in examining what had already been done in some of the best specimens of building and gardening in the country, could not but have prevented their proprietors from making their places absolutely hideous, and throwing away ten, twenty, or thirty thousand dollars. Ignorance is *not* bliss, nor is it economy, in improving a country seat.

We think, also, there can scarcely be a question that an examination of the best examples of taste in rural improvement at home, is far more instructive to an American, than an inspection of the finest country places in Europe; and this, chiefly, because a really successful example at home is based upon republican modes of life, enjoyment, and expenditure,—which are almost the reverse of those of an aristocratic government. For the same reason, we think those places most instructive, and best worth general study in this country, which realize most completely our ideal of refined country life in America. To do this, it is by no means necessary to have baronial possessions, or a mansion of vast extent. No more should be attempted than can be done well, and in perfect harmony with our habits, mode of life, and domestic institutions. Hence, smaller suburban residences, like those in the neighborhood of Boston, are, perhaps, better models, or studies for the public generally, than our grander and more extensive seats; mainly because they are more expressive of the means and character of the majority of those of our countrymen whose intelligence and refinement leads them to find their happiness in country life. It is better to attempt a small place, and attain perfect success, than to fail in one of greater extent.

Having pointed out what we consider indispensable to be done, to assist in forming, if possible, a correct taste in those who have only a natural delicacy of organization, which they miscall taste, we may also add that good taste, or even a perfect taste, is often by no means sufficient for the production of really *extensive* works in rural architecture or landscape-gardening.

"Taste," says *Cousin*, in his Philosophy of the Beautiful, "is a faculty indolent and passive; it reposes tranquilly in the contemplation of the Beautiful in Nature. *Genius* is proud and free; genius creates and reconstructs."

He, therefore, (whether as amateur or professor,) who hopes to be successful in the highest degree, in the arts of refined building or landscape-gardening, must possess not only *taste* to appreciate the Beautiful, but genius to produce it. Do we not often see persons who have for half their lives enjoyed a reputation for correct taste, suddenly lose it when they attempt to embody it in some practical manner? Such persons have only the "indolent and passive," and not the "free and creative faculty." Yet there are a thousand little offices of supervision and control, where the taste alone may be exercised with the happiest results upon a country place. It is by no means a small merit to prevent any violations of

* We should apologise for thus pointing out private places, did we not know that the liberal proprietors of those just named, are persons who take the liveliest interest in the progress of good taste, and will cheerfully allow their places to be examined by those who visit them with such motives as we here urge,—very different from idle curiosity.

good taste, if we cannot achieve any great work of genius. And we are happy to be able to say that we know many amateurs in this country who unite with a refined taste a creative genius, or practical ability to carry beautiful improvements into execution, which has already enriched the country with beautiful examples of rural residences; and we can congratulate ourselves that, along with other traits of the Anglo-Saxon mind, we have by no means failed in our inheritance of that fine appreciation of rural beauty, and the power of developing it, which the English have so long possessed.

We hope the number of those who are able to enjoy this most refined kind of happiness will every day grow more numerous; and that it may do so, we are confident we can give no better advice than again to commend beginners, before they lay a corner stone, or plant a tree, to visit and study at least a dozen or twenty of the acknowledged best specimens of good taste in America.

THE PRESIDENT OF THE MASSACHUSETTS HORTICULTURAL SOCIETY.

[WITH A PORTRAIT.]

We are enabled, in commencing our third volume, to give our readers, not only our usual frontispiece and engravings, but also a fine steel-plate portrait of Marshall P. Wilder, Esq., the well known President of the Massachusetts Horticultural Society.

For this plate, and the following memoir, we are under particular obligations to the liberality of J. S. Skinner, Esq., editor of the *Farmers' Library*. It would have been gratifying to us to have been the *first medium* of making public some sketch of the labors of our esteemed friend and correspondent; but the Farmers' Library has taken the lead in holding up to public view the services of Americans who have distinguished themselves rather in the arts of peace than the arts of war.

Mr. Skinner, agreeing with us, however, that a *horticultural* journal is the more appropriate channel for awarding honors to one of our most successful devotees of horticulture, has most generously consented to our making any use we please of the plate and memoir in question, which we accordingly lay before our readers in the present number.

Every one knows the high rank which the Massachusetts Society has held for years past; and we hazard nothing in saying that, under all circumstances, this Society, composed as it is of many of the ablest horticulturists in the Commonwealth, has been especially fortunate of late years in its *presiding officer*. In this country, without any patronage from government, from wealthy corporations, or powerful patrons, great energy, unwearied perseverance, and much skill and tact, are necessary in its executive officers, to maintain the influence, meet the large expenses, and justify the expectations of the community regarding such institutions. All these qualities are found singularly united in the subject of the memoir to which we refer. His indomitable energy and large store of practical knowledge, are only equalled by the generous and unselfish manner in which he gives every possible moment to the duties of his position, and the cordial urbanity and

frankness with which the inquiring stranger or the curious friend is met, who may visit the Hall of the Society, or the Garden of its President, for the purpose of learning the occult mysteries of the earliest of the arts.

Indeed, the Massachusetts Society, of late, has begun to exert an influence far more powerful than that of mere local societies devoted to the improvement of the arts of culture; and what, truly, may we not hope from its effect, when such men as Abbott Lawrence, are heard publicly to declare that even in the act of choosing a mechanic, he would go out of his way to find one who "had been seen on Saturday night taking home *a flower-pot under his arm.*" The usual exhibitions of the Society, perhaps the largest, in a pomological point of view, in the world, are now visited by delegates and committees, as well as by great numbers of strangers, from all parts of the Union. The first desire for an orchard of fine fruit, the first yearning for a beautiful garden, have been awakened, while the beholder of some rudely cultivated farm has gazed on the paradise of perfect productions assembled at its September shows. Its weekly exhibitions are also frequently the elegant *reünions* of much of the intelligence, wit and beauty of the splendid metropolis of New-England, as well as of the working gardeners themselves.

The taste for flowers and fruits, and for all that is attractive in rural life, is thus begotten and diffused in all classes of society. The New-England character, which has already made its mark upon the age, by its energy, enterprise and thrift, will soon also be found laboring everywhere in the good work of making the wilderness to blossom as the rose. Not content with clearing forests, planting new states, and diffusing education as freely as the sunshine itself, it is easy to see that it also strives to be foremost in teaching the elegancies of life, especially in the knowledge and love of gardens, which we see in progress about Boston. Do we need a better and more elevated future, for the rural life of all America? May we, under her example, live to see our whole country, unrivalled as it is in natural advantages of soil and climate, overspread with smiling gardens and fruitful orchards—spells that bind men strongly to their homes—filled with the choicest productions of Flora and Pomona! and these, too, not held forever by a few great and privileged landlords, but the property of the numberless cultivators of the soil, a soil where truly every man may "sit under his own vine." Ed.

If there is any one class of citizens which deserves at the present moment especially the respect and admiration of their countrymen, it is, perhaps, the merchants of Boston.

To indomitable energy and enterprise, in acquiring wealth, they add a spirit of wisdom and philanthropy, and a faith in the progress of Man in the use of it, which at once does honor to the city in which they live, and raises the character of commercial pursuits more than all the honors of knighthood.

It would be making too long a catalogue were we to enumerate even the most conspicuous public benefits which Massachusetts has derived from this intelligent and high-minded class of her sons. Numberless public charities have been founded and supported: public and free schools planned and sustained; lectures given to the public; new worlds of thought opened to the blind; the deaf and dumb brought into correspondence with their fellow men; poor artists sent abroad to develop their Heaven-bestowed talents; colleges richly endowed, and a great Scientific School opened cheaply to every citizen of the Commonwealth for instruction in sciences applicable to all the useful industries of life.

This, and much more, has been done by a liberal application of the wealth produced by their own industry, by the merchants of Boston. It would be a pleasing task to designate those who have thus most successfully proved that they understand the true uses and true obligations of wealth. But we are obliged at this moment to confine ourselves to a single illustration of the benefits which a merchant, engrossed with business, may confer on his countrymen, when actuated by this large spirit of usefulness to his race.

Pearl-street, in Boston, completely rebuilt within a few years, presents to the eye two continuous lines of fine warehouses —beautifully and fittingly built, in an appropriate architectural style, of neatly-dressed granite. Enter with us one of these stores at the beginning of the street; ascend into spacious apartments where on every side are seen boxes and bales filled with the productions of the active looms of New-England; pass thro' counting-rooms where various clerks poring over huge ledgers tell of a widely extended business; and finally penetrate to a third office. In this inner vestibule of the house of trade, sits, before a desk covered with a large correspondence, a merchant thoroughly devoted to his calling. In his countenance you see only the engrossing cares of commerce, and his ample brow, and clear penetrating eye are full of plans for the increase of cotton mills and American manufactured goods, of better quality, and lower price, than John Bull can possibly send into our market.

About four miles south of Boston is the town of Dorchester—one of those agreeable rural suburbs of Boston, which the sturdy city, now full of robust health, is fast overtaking and swallowing up with its vast commercial appetite. In a part of this town is situated a rural residence—well known as Hawthorn Grove. If we enter the gates of this simple and unpretending place, about sunrise or sunset, we shall find there not only grounds which are a complete museum of horticulture, full of every known variety of fruit tree; orchards well planted; and long, fruitful alleys: but, also, the same merchant we saw in the inner counting-room in Pearl-street. The same? yes! the same to the common observer, doubtless; that is to say, the gentleman whose portrait illustrates this number of The Farmers' Library; but not now the busy, engrossed merchant—only the zealous enthusiastic *horticulturist*—the President of the Massachusetts Horticultural Society—the experienced pomologist—the importer of, and anxious seeker after all new fruits and plants; in short, Marshall P. Wilder—the subject of the present notice.

We are not about to write the life of Col. Wilder. We hope it may be many long years, filled, like the present, with usefulness, before he needs a biographer. It is our more agreeable task, at the present moment, to glance hastily upon the field of labors in which his name has become a public one, and in which it is especially interesting to the readers of this journal—as a horticulturist.

It is sufficient, then, to say that Colonel Wilder is a native of New-Hampshire, the Granite State, which boasts, not without reason, that "*men* are the fairest product of her soil." He was born in the town of Rindge, N. H., in September, 1798, where his devotion to his garden and to mercantile life awakened along with each other. For more than twenty years he has been one of the most industrious and successful merchants of Boston, and for sixteen years he has employed every moment of *forced* leisure—leisure borrowed, not from business, but from the ordinary relaxations of the business man, in carrying out his favorite study of horticulture.

In a city most conspicuons among all American cities for its horticultural amateurs, Col. Wilder has long been known as one of the most zealous and the most active devotees of this science. For eight years past he has been annually elected President of the Massachusetts Horticultural Society—first of all institutions of the kind in the Union for its large activity, intelligence, and usefulness. During his administration, the number of members and the funds of the society have been greatly increased, its new hall erected, at a cost of $40,000, and a very richly illustrated series of its *Transactions* commenced.

But this is to us, and to the country at large, not the most important and valuable view of his great services as a scientific

cultivator of the soil. There are, perhaps, many men's grounds more attractive, or more captivating to the novice, than those of the President of the Horticultural Society. But we think we may safely say that no garden in America, either public or private, has been more fruitful in good experinces for the benefit of the art generally, and especially of pomology, than that of Hawthorn Grove.

Let us say a word or two to make this plainer to the general reader. Horticulture has been so much perfected in the last thirty years that it may be said to be not only a science of considerable breadth, but an art involving in its materials ten thousand details. In all parts of Europe and America, new fruits, plants, and trees, are continually brought into existence by the creative hand of the skillful gardener. Especially at one period, about fifteen years ago, did the Flemish cultivators astonish the world of fruit-growers with their catalogues of superlative new fruits. Now the natural vanity of some, and the natural ignorance of other cultivators, lead them to overrate the merits of many new varieties. Difference of soil and climate also renders a fruit of the highest value in one country of lesser or greater value in another. Behold, then, how important that some steps should be taken by which all this vast mass of accumulated material should be put into the crucible of knowledge from time to time, so that the pure gold should be separated from the dross, for the benefit of a whole community of men who have good orchards and gardens!

In other countries, societies or governments, with abundant means at their command, have undertaken this herculean task of collecting and proving new fruits and plants. But, in this country, no society has as yet been able, no one of the states willing, to prosecute this interesting and necessary series of experiments. But what the Horticultural Society of London has done for England in the way of fruits, or the *Jardin des Plantes* for France, in trees and plants, Col. Wilder has to a very considerable extent done for New-England, (and we may indeed say for the Union,) in his own private grounds at Hawthorn Grove.

To accomplish this object he has long pursued the following plan:

1st. Entering into active correspondence and maintaining standing orders with all the most eminent horticultural amateurs and nurserymen of foreign countries, and procuring at the earliest moment every new production worthy of note, abroad as well as at home. This has necessarily given his grounds, at all times, the aspect of a crowded museum of gardening novelties from all parts of the world, more attractive to the understanding of the connoisseur than to the eye of the tyro.

2d. Continually testing these new fruits and plants by putting them in proper sites and soils, keeping an accurate record of all results, exhibiting all his specimens before the public at the exhibition of the horticultural society, and freely distributing scions, plants or seeds, to other persons.

3d. Producing new varieties by the scientific process of hybridizing*—several of which have been great acquisitions to the country.

As an experimental pomologist, we are inclined to give the subject of this notice higher praise than in any other department. He has that faculty of *just discrimination* so rare among *enthusiastic* collectors, which enables him to *reject and publicly excommunicate* a really inferior variety after thoroughly testing it; even if it should come to him with the highest reputation from abroad. "Take nothing on trust—prove for yourself, and hold fast to that which is good;" such are the maxims which govern his experimental practice in his favorite art. We have indeed heard him remark to a friend, who expressed his surprise at his patience in collecting so many varieties of fruits, to find only so small a number really worthy of general cultivation, that such was his desire to get at the truth that "his satisfaction in ascertaining that a variety was poor (thus preventing its extensive dissemination) was nearly as great as in finding it worthy of general cultivation."

The *pear* has perhaps been Col. Wilder's favorite fruit, and he has been remarkably successful in its cultivation. Even upon

* A very able article on the curious and interesting subject of *hybridization*, from the pen of Col. Wilder, will be found in the 2d Part of the "Transactions of the Massachusetts Horticultural Society."

the quince stock some of his trees have borne a barrel in a season. He has exhibited one hundred and sixty varieties of this fruit at a single show of the Massachusetts Society, and his garden now contains more than *five hundred sorts* of pears from all parts of the world, either in bearing or under cultivation for proving their value for the American soil or climate.

Among exotic plants the *Camellia* was long ago his favorite. His collection at one time embraced nearly three hundred sorts, comprising every novelty extant. Applying, with his usual success, hybridization to this genus of plants, he has been successful in producing two new varieties of surpassing beauty—not excelled by the most perfect productions of Europe.

The Massachusetts Horticultural Society two years ago voted him a special prize of silver plate for those beautiful acquisitions to the domains of Flora.*

Col. Wilder's devotion to horticulture, his liberality in imparting information, however dearly bought, and in distributing seeds, plants, and scions to parts of the country where their value would be appreciated, or whence some excellent native production was offered in exchange, have made him known as a benefactor to those who live "amid gardens and green fields" in all parts of the Union.

We may remark, in conclusion, that it would be difficult to present to the contemplation of our readers an instance of an individual who so completely accomplishes all the laborious duties of a life of large mercantile pursuits, and yet who at the same time makes his few hours of leisure, each day, tell so emphatically for his own happiness, and the benefit of his fellow cultivators of the soil, in all parts of the country. It is only indeed by making horticulture the *great working pastime* of his life, that he has been able to accomplish so much. But can one hold up a better example to the emulation of those citizens who find nothing to do in the country, and no occupation there, worthy of engaging their energies and their industriously accumulated fortunes?

For ourselves, we rejoice in the long-sought opportunity and means of presenting to our young readers, and to gentlemen of opulence and leisure, even this brief sketch of what has been done by a single citizen, to investigate the merits and perfect the properties of our flowers and fruits; much as it falls short of giving a full idea of his contributions to an elegant and intellectual pursuit—one that at once denotes, accelerates and adorns in all countries, the progress of civilization. Nor can the full measure of honor due to such citizens as Col. Wilder and his associates, for the strong lead they have taken, as well in the science as in the practice of horticulture, be properly estimated without making large allowance for the rigors of the climate with which they have had to contend. In more genial regions, Nature scatters profusely her beautiful creations, with open hand—without waiting for Art to assist, or Industry to serve her—while in the north, she yields them only, if not reluctantly, to the most skillful and assiduous importunities. But to these she does give them in such variety and richness, as none can appreciate who have not witnessed an exhibition of the society over which Col. Wilder presides. Well do we remember when, on our first entrance into Hawthorn Grove,

> "The perfumed air
> Gave another sense, its prelude rich
> Of what the eye should feast."

Since that time, always—and we may say habitually—holding in high comparative estimation the beauty and the usefulness of lives and labors thus devoted to peaceful and meliorating pursuits, we have been anxious, in a sense of duty, and for the good of society, (least of all for his own sake,) to pay to the proprietor the very inadequate homage which here we render.

For the painting from which the engraving has been made, we are indebted to the artist, Mr. Marchant of this city, in whose collection it still remains—a true presentment of the estimable original, as far as Art can supply one. The engraving, as will be seen, is by Mr. Jackman, and does him credit as a worker in that, one of the finest among the fine arts.

* These two Camellias were named by the society, C. Wilderii and C Mrs Wilder. We may give our farming readers some idea of the commercial value of new and rare plants by remarking that the stock of these two varieties was purchased by a nurseryman for $1,000, who immediately went to Europe, where, we learn, he disposed of them by subscription, at *ten guineas* the pair.

FURTHER NOTES ON THE STRAWBERRY QUESTION.

BY SENEX, NEW-YORK.

In your last number you have some remarks from Dr. Valk upon the strawberry question, by which I find that the Doctor has misunderstood the tenor of the article from me, which you inserted in the Oct. number of the Horticulturist.

I wrote that article partly with the intention of suggesting what was really the cause of the sterility of the strawberry, and partly with the intention of drawing the attention of those who are debating the strawberry question, to the necessity of adhering closely to the strict meaning of the terms they used; for unless they did so, they would only make "confusion worse confounded." I am sorry that my remarks have not had the intended effect, especially as they have been misunderstood by a person of such knowledge and extensive reading as Dr. Valk, as his papers on vegetable physiology abundantly prove. I will now, trusting that my present writing may meet with a better reception, explain what appears to be wanting in my former article.

By the term *diœcious*, all botanists understand plants having *naturally* the female organs on one plant and the male organs on another, and these are never under any circumstances found together in the same flower; by pistillate and staminate, (or fertile and sterile, as relates to seedbearing, which are the better terms,) are understood plants which having one of these organs in an imperfect state, or incapable of fulfilling its functions from any cause, the other is perfect; for instance, in the staminate strawberries the receptacle remains with the pistils upon it, but does not always produce fruit, as I believe, owing to the plant, through improper soil or cultivation, not having strength to do so; sometimes the seeds are perfect, but the receptacle is small and deformed. Now, according to the theory lately started, if the seeds are perfect the receptacle must of necessity be so to: this, as I before said, I do not assent to. Again, in the pistillate flowers, the stamens, or rather filaments, are there, but without anthers; or if with anthers, they are without pollen. Yet I think instances enough could be given, (may have already been given,) of such flowers producing fine fruit without impregnation.

The *Wood Alpine* Strawberry has perfect flowers under all circumstances, at least, as far as has been observed, and always produces fruit; now if one of the genera Fragraria is hermaphrodite and others *diœcious*, it should, according to the rules of botanical science, be a sufficient reason for making a new genera; and then Hovey's Seedling might, perhaps, stand as the type of a new genera, to be called "Hoveya." Would not this be an evident absurdity? I would ask Dr. Valk if ever he saw a staminate strawberry wanting the receptacle or pistils in either a more or less perfect state, or whether he ever saw a diœcious plant in which the male flower had the least rudiments of the opposite sexual organs, or vice versa? Did he ever find a pistil or ovary, or the rudiments of one in the flower of a male willow, *Shepherdia*, *Hippophæ*, or poplar? That they are sometimes monœcious I admit; but never hermaphrodite.

As to the genus *Cliffortia*, I find, upon reference to *Lindley's Natural System*, that

he places it in the order Sanguisorbeæ; and I cannot find, in any of Dr. Lindley's writings to which I have access, an instance where he refers a diœcious plant to the order Rosaceæ. The quotation from Dr. LINDLEY, that "the old Hautbois Strawberry bears the male and female flowers on different roots," does not, with all deference to Dr. VALK, make him say that they are diœcious; and the other quotation from a letter to a correspondent in 1843, where he says—"those flowers which have the stamens *large* and the pistils *small* are males," etc. etc., prove that Dr. VALK does not understand Dr. LINDLEY aright. He never intended to say that the male flower of a monœcious or a diœcious plant had any pistils, or the rudiments of any; and Dr. VALK virtually concedes this point; for in classifying the strawberries, he speaks of many as *diœcious from abortion.*

I now come to speak of the use to be made of this strict adherence to the meaning of the terms used. If a plant is naturally diœcious, no art of the horticulturist *can*, *will*, or *ever* did make it to the contrary; and therefore all the evidence produced by Mr. TRACY, Mr. DOWNING, Mr. ALLEN and others, as to the changes in Hovey's Seedling, falls to the ground. We may transform the sexual organs of plants into petals or leaves, from which they are derived; but we cannot transform one sexual organ into another, or produce one where it is naturally wanting. It would be folly to attempt it,—the law of nature, in regard to this, appears to be so immutable; but we can by cultivation destroy in part, or altogether, the different sexual organs, and, per contra, when destroyed, we can, by a different course of treatment, restore them; and this is not only true of the sexual organs, but also of all other parts of a plant. I think, therefore, that cultivators should look more to their soils and cultivation to find out why their strawberries are unproductive; and the facts quoted by Dr. VALK go to prove this. Does not the fact, that Mr. TRACY had grown both staminate and pistillate Hovey's Seedling prove that cultivation produces a *great* change? If the original seedling was perfect, then cultivation has made it imperfect; if pistillate, then cultivation has, in some instances at least, brought the stamens from an imperfect to a perfect state: if this is denied, then comes the absurdity of having two Hovey's Seedlings from one seed. Mr. HOVEY formerly disbelieved this sexual organ theory, but lately changed his opinion, for which he chose an unfortunate time,—as I have heard it remarked that he did not do so until the *staminate* Boston Pine was ready to be sent out to fertilize the *pistillate* Hovey's Seedling!

I am still decidedly of the opinion that the impregnation of the ovaries, through the pistils, has nothing to do with the development of the receptacle, which, *under suitable cultivation, will perfect itself and become an edible fruit without any reference to the seeds being perfect or imperfect.*

My experience as a cultivator has long ago taught me this. Often have I carefully impregnated flowers in order to obtain seeds of choice plants, but not had a perfect seed, yet had otherwise perfect fruit. Who, as a pomologist or nurseryman, has not seen apples, pears, plums, peaches, and other fruits seedless? Are not the Sultana raisins of commerce seedless? Is not the seedless Berberry, seed-bearing on some soils? Is not the seedless Lemon well known to gardeners? Is there any one, at all conversant with vegetable physiology or metamorphosis, but must be able to call to mind very many instances of this kind. Hybrid Geraniums lose their anthers, which

appears to be produced by continual crossing, producing an imperfect state of the floral organs,—all being sacrificed to the size and colour of the flower. So with the strawberry; nearly all the hybrid kinds have had all other floral parts sacrificed to the size of the receptacle; and this monstrous development requires a strong rich soil to support it,—light, frothy soils, always rendering such strawberries unproductive. So of the Hautbois Strawberry, which, for a Wood Strawberry, has a large receptacle. In Herefordshire, in England, it produces enormous crops; but in other parts of England is almost worthless. Yet in this variety there is a tendency, in what are called the male flowers, to produce fruit, as they frequently have imperfect fruit but *perfect* seeds. The Pine Strawberry, grown in the neighborhood of Bath, Eng., is very productive and fine; but the same plant, sent to other parts, are scarcely worth growing; and many similar instances can be named in this country.

This sexual organ theory is, I find, being applied to other fruits. A nurseryman here has been applied to for fruit bearing raspberries; and the White Antwerps he sells are said to be among the most prolific and finest to be obtained anywhere; yet in his own nursery he never had the pleasure of seeing a quart of perfect fruit from them,—the soil and situation being unsuitable. I think that strawberry growers will much further advance horticultural science by finding out by experiment and analyses the most suitable soil or manure for the plants, than in seeking their fruitfulness by such doubtful means as impregnation. SENEX.

New-York, June, 1848.

REMARKS ON HYBRIDIZING PLANTS.

[From the London Hort. Magazine.]

THE operation of hybridizing plants consists in fertilizing the stigma of the flower of one plant with the pollen of another, of different though allied characters. The effect of this, when the cross fecundation is actually effected, is to originate a new form, usually possessing properties and characters intermediate between its parents. Such a production is a mule or *hybrid* plant, and is to be regarded as a very different thing from what is understood as a *variety*.

In a practical point of view, this power of producing hybrid plants is one of the most important means which man possesses of modifying the vegetable races, and adapting them to his purposes. To it we owe some, indeed many, of our most beautiful garden flowers, as well as the most valuable of our fruits and vegetables, many of which have been so far improved—we use this word in a relative sense only—that further amelioration or improvement seems hardly to be expected. Very little has been done in altering the characters and properties of our timber trees by this process, but there appears no reason to suppose that they would not admit of as much being effected as in the other classes of plants. Indeed, there is reason to believe that any property that may be possessed by plants of any class, or to which there is any tendency either inherent or manifest, may be modified to an almost unlimited extent by perseverance and assiduity in hybridizing.

It would not be desirable to enumerate all the changes which have been or may be effected by this process; it will be sufficient to notice a few of the most prominent. Among flowers the most important qualities which can be impressed on the different races are greater hardiness of constitution, precocity or tardiness of flowering, the communication of odor where it is not possessed, increase in the size, alterations in the

form of individual flowers, or greater prolificacy, and improved arrangement, as regards their collective production. Modifications and blending of colour, which are also sometimes aimed at, seem to be the most paltry changes (in a general sense) of any that are attempted. These changes affect appearance; but among fruit and vegetables the changes to be effected should be confined more to productiveness and quality than to appearance. Thus the increase of size, together with the improvement or modification of the sensible qualities, are the main objects to be sought, followed by such qualities of general application as greater hardiness, precocity, tardity, or productiveness. In timber trees the production of greater bulk is the first object, and then the rendering of this bulk at least of equal, if not superior, strength, toughness, compactness, or whatever peculiar property individual kinds may be prized for.

It has been thought that a law very similar to that which obtains among animals also regulates the production and fertility of mule plants; and so far as observations have been made and recorded, this seems, as a general rule,* to be near the truth. Thus two distinct species of the same genus of plants will, in many cases, produce an intermediate offspring, perfect as far as regards the exercise of vital functions, but defective as regards the power of perpetuating itself by a seminal process. Even when in the first generation this sterility is not apparent, it becomes so in the second, and less commonly in tne third or in the fourth generation. Such mules may, however, be rendered fertile by the application of the pollen of either parent, the characters of which then become assumed by the offspring; in other words, the hybrid form reverts to that of one of its parents. Plants, however, appear to possess this property of admitting of hybridization far more generally than animals; for while animal mules are comparatively rare, there is scarcely any family of plants that will not admit of being hybridized with due care and attention. It is, however, only between species in which the degree of relationship is somewhat close that this intercourse is effected; and as a rule, those plants which accord most fully in general structure and constitution will most readily admit of artificial union. Species that are very dissimilar appear to have some natural obstacle which prevents mutual fertilization, and this obstacle becomes insurmountable in the case of very different genera. No such thing as the intermixture of roses and black currants, and the consequent production of "black roses," of which we do sometimes hear, can therefore possibly take place. There are some few recorded instances of mules between different genera, but in these cases a certain degree of relationship existed, and the productions were both sickly and short-lived. Thus Gærtner is said to have obtained such hybrids, or *bigeners*, as they are termed, between daturas and henbane and tobacco, (all solanaceous plants,) and between the poppy and horn poppy, (both of the same natural order.) Weigman was successful in mixing lentils and vetches, (both leguminous.) Mr. Knight is recorded to have crossed the almond with the peach, (both rosaceous.) Kölreuter is recorded to have effected a similar union between different malvaceous plants; and Sageret obtained a cross between the cabbage and horseradish, which are both cruciferous plants. The Dean of Manchester, who has given much attention to the subject, and by far the best account of mule plants which has appeared, regards these and other like statements as erroneous, or at least doubtful, and supports this opinion by the fact that, in this country, where the passion for horticulture is very great, and the muling of plants has been carried to a great extent, there is no undoubted instance of a mule between distinct genera. On the other hand, there are many cases recorded of closely allied species refusing to intermix. Mr. Knight could not succeed in effecting a cross between the common and Morello cherries; and Dr. Lindley mentions his own vain endeavors to cross the gooseberry and the currant. Such plants as the apple and the pear, the raspberry and the blackberry, though very closely related, have not been known to intermix.

Wild hybrid varieties occur but seldom;

* Much of what may militate against this opinion may probably be referred to some defect in the present means and mode of constructing and distinguishing different genera.

at least, there are not many well-attested instances of their occurrence. Bentham ascertained that Lapeyrouse's Saxifraga luteopurpurea, and Decandolle's S. ambigua, are only wild accidental hybrids between S. arenaria and calyciflora, being only found where the two latter grow together, and there forming a suite of intermediate states between the two. Such genera as Salix, Rosa, Rubus, &c., are probably composed in a great measure of wild hybrids. Gentians have been remarked on European mountains, which have had such an origin. Bentham also mentions Cistus longifolius as being a hybrid between C. monspessulanus and populifolius, in the woods of Fontfroide, near Narbonne; and Cistus Ledon is constantly being produced between C. monspessulanus and laurifolius. It is the tendency of hybrid plants, when they produce seeds, to revert to their parent forms, that renders wild hybrids so rarely met with. Herbert, however, mentions the following genera as having produced spontaneous hybrids:—Ranunculus, Anemone, Hypericum, Scleranthus, Drosera, Potentilla, Geum, Medicago, Galium, Centaurea, Stachys, Rhinanthus, Digitalis, Verbascum, Gentiana, Mentha, Quercus, Salix, Narcissus, and Crinum. These names appear to be quoted by Herbert on the authority of Schiede.

Hybrids obtained by fertilizing the pistil of *one species* by the pollen of *another species*, are considered as true *mules* or hybrids; the result of intermixing two *varieties* of the *same species* is called a *crossbred*. It was held that the former was sterile, and incapable of yielding seed; whilst the others, on the contrary, usually produced fertile seed, which shortly reverted to one or other of the parents, unless again influenced by further hybridization. This opinion, however, that all vegetable hybrids are sterile, is not found to be tenable, though it is the case to a certain extent. The cause of this sterility is very doubtful; it has been referred to a want of pollen, but this explanation is unsatisfactory, inasmuch as no appreciable difference of structure in this respect has been detected in those cases which have been made the subject of especial inquiry. Crossbred varieties may certainly be hybridized, but there is in them a strong tendency to revert to one of the parents. The progeny of varieties of the same species is in all cases as fertile as the parents.

Referring to the botanical questions which the hybridizing of plants involves, and relying on numerous well ascertained facts in support of his views, Dr. Herbert considers that genera are the only really natural divisions among plants, the species and varieties of which have all sprung originally from one type; and that, therefore, there is no difference except in degree—that is, no absolute difference between what are called species and varieties. He further considers that no plants which interbreed can, according to this view, belong to distinct genera, and that any arrangement which separates such plants must be revised; that discrimination between species and permanent varieties of plants is artificial, capricious, and insignificant; and, consequently, that the question often raised, whether a wild plant is a new species or a variety of a known species, is a waste of intellect upon a point which does not admit of precise definition.

The fertilization of plants is supposed to be effected by the emission of tubes of extreme tenuity from the grains of pollen when applied to the stigma; these tubes pass down the style into the ovary, and eventually reach the young ovules, which without this contact are unfertile. The operation, so far as it can be aided by the hybridizer, consists simply in applying the pollen of one plant (which becomes the male parent) to the stigma of the other (which becomes the female parent.) But there are certain conditions which are necessary to fertilization. The flower whose stigma is to be fertilized is to be deprived of its own anthers (if it is an hermaphrodite flower) before they burst and discharge their pollen, for in this case it would probably be self-impregnated, and then there would be little chance of success, for superfœtation, though not held to be impossible in plants any more than in animals, is equally an exception to the general rule, and therefore not likely to occur. The pollen must also be applied at the precise time when the stigma is perfectly developed and covered with its natural mucus, for

otherwise it will not act; in other words, if the stigma is too young or too old, the application will be ineffectual. The stigma to which the pollen has been applied must be guared from injury until after fertilization has taken place, or the application will be ineffectual. The time which transpires before this is secured varies in different plants; in some it is very slow, occupying a month and upwards. For the same reason, after the pollen has been applied, the pistils should be secured as far as possible from any chance of contact with other pollen, either by the agency of wind or insects, and especially should they be secured from being influenced by the pollen of their own species, for this is probably much more ready in its action than that obtained from a strange plant. A very interesting fact connected with pollen has not until latterly been fully proved; we allude to its property of keeping, without losing its peculiar vivifying powers, if stored in a proper manner. The principal conditions seem to be to keep it dry and cool by whatever means may be preferred.

M. Haquin, a distinguished horticulturist at Liege, has impregnated flowers of Azalea with pollen kept for six weeks, and Camellias with pollen kept sixty-five days; and he even thinks that it would be quite effective if preserved until the following year, which supposition is confirmed by the experience of Mr. Jackson, a nurseryman in Yorkshire, who has found the pollen of a variety of Rhododendron Smithii to retain its fertilizing power for twelve months. Haquin's plan of preserving pollen is to gather the stamens just before the anther cells burst, and wrap them in writing paper, and place them in a dry room; he then collects the pollen they emit, and preserves it in sheet lead in a cool dry place. M. Godefroy suggests that two concave glasses, like those employed for keeping vaccine matter in, would be better. The globules or granules of pollen must not be crushed. This is, indeed, a most valuable fact connected with the subject before us, for upon a proper selection of pollen very much of success depends, and a store of this can therefore be laid by whenever it is procurable, ready for use as soon as an opportunity offers. Unless this were the case, the means of improvement would be very limited, for it often happens that the two kinds which it may be desired to intermix are not in flower at the same time, or at least not in the requisite degree of development.

In raising and blooming seedling plants in this way, there is one point which it appears to be of importance to keep in view, and that is, that whether it be flowers or fruit, the real properties and qualities of the seedling are not at first to be detected, and therefore no hasty conclusion should be arrived at as to its merits. A very remarkable case, illustrative of this point, is on record:—when the late Mr. Knight raised the Black Heart Cherry, part of its first produce was sent to the Horticultural Society, and was considered so bad, that had not the tree been called the property of one of his children, (who sowed the seed,) it would have been cut in, and worked with something else; the after produce of this tree was of better quality, and the variety is now known as one of the richest of its class. This case appears to me to be decisive.

It may also be worth while to mention, that as no visible alteration in the appearance of the seed vessels results from impregnation by another, this want of change is not to be considered as being conclusive of failure. Whether or not impregnation has been effected, is easily determined; for when this has taken place the stigmas soon wither, while those which have not received the pollen remain green and vigorous for a much longer time, varying of course with the duration of the particular flower. A change is generally to be noticed first in the petals, as in the case of the Pelargonium, in which they usually fall within three or four hours after impregnation, affording a convincing proof of the operation being successful.

It may be interesting to notice a few of the recorded instances in which definite results have been obtained. One of them is the case of some Fuchsias raised by Mr. Standish, of Bagshot, who crossed corymbiflora with some other kind, as globosa, and obtained but very moderate success in the first generation; these crosses were, however, again crossed with one of the parents, (we believe globosa,) and this result was some of the best varieties of

Fuchsia which had then been raised. Mr. Knight impregnated blooms of a degenerate sort of pea with the pollen of a large and luxuriant grey pea; the seeds exhibited no perceptible difference from those of the other plants of the same variety, perhaps because the external covering of the seed was entirely furnished by the female; but in the spring the effect was obvious, for they grew with great luxuriance, and produced dark grey seeds. By impregnating this variety with others, the colour was again changed, and superior ones produced. In these experiments, when the pollen of a coloured blossom was introduced into a white one, all the seeds were coloured, but the opposite was not the case when the pollen of a white blossom was introduced to a coloured one. Lord Carnarvon obtained a mule Rhododendron by fertilizing R. catawbiense with R. arboreum. In this case the mule had the flowers and colour of the latter, and the foliage and hardness of the former. M. Gallesio procured more certainly double flowers by crossing those which were half double by others in a similar state. M. Fries Morel found crossed clove pinks to resemble the mother plant in form and the father plant in colour. The Dean of Manchester found that in crossing lilies, the plants produced resembled the mother plant in their leaves and stems, and the father plant in all their reproductive organs; this agrees remarkably with the result in the case of Lord Carnarvon's Rhododendron. Some very remarkable hybrid Azaleas were obtained by the Dean of Manchester from Rhododendron ponticum fertilized by Azalea pontica. In this case there was little trace of the Rhododendron in the seedling, except in the tinting of the flowers, and to a certain extent in their arrangement: the evergreen habit of the female parent was totally obliterated. He also got a seedling between *Rhodora canadensis* fertilized by the *Azalea pontica;* in this case the hybrid partook decidedly of the foliage, wood, and habit of the Rhodora, its female parent, and in the flowers, which were of a yellowish colour, it followed the male parent. Many other crosses were made by the same distinguished botanist between Rhododendrons and Azaleas, and always with similar results; and it was on the evidence of these experiments of Mr. Herbert's that the genera Rhododendron, Azalea, and Rhodora have been amalgamated.

Captain Thurtell found that in cross-bred Pelargoniums the colour and spotting resembled the male parent, while the form approached more closely to that of the female. In the case of Gloxinias it has been remarked that in all cases when G. rubra has been fertilized with G. speciosa, or any of its varieties, the result has uniformly been a degeneracy in the colour of the varieties; the few which have been produced possessing any merit in this respect, have been obtained by crossing with G. candida.

The mode in which colours act in hybrid crosses is singular. When the bright yellow flower of the white turnip is crossed with the dull golden of the Swede, an intermediate colour is not obtained, but some of the mules as to colour follow one parent, and some the other. When a blue Anagallis is crossed with the orange-coloured, the effect is to discharge the yellow from the orange, leaving the dull red which was combined with it, whilst the blue is obliterated. In Mr. Herbert's Rhododendro-Azaleas, the purple of one parent, and the yellow of another, was succeeded in the mules by whitish flowers, more or less tinted with rose, and with a yellow blotch on the upper segment. Usually, however, it is most influenced by the male parent.

In the absence of better evidence than we possess on this subject, we think it may be assumed—

1st. That the characters of the male parent become more fully developed in the flowers and parts of fructification in the progeny, than those of the female.

2d. That the characters and general constitution and foliage of the female are to a great extent transferred to the progeny.

From these deductions, and other considerations we may venture to draw the following inferences, being fully aware, however, that the evidence is on some points conflicting, and even contradictory:

Colour in flowers* seems generally to be most influenced by the male parent.

Form in flowers apparently more closely

* A cross between a rose or byblomen tulip, and a bizarre, is said usually to produce "tricolors," which are not prized.

follows that of the female parent (this at least has been observed in the Pelargonium.)

Size and robustness are communicated by either parent.

In seeds the colour of those of the male parent predominates.

In some cases the intended female flowers should be much less advanced than the other; the Calceolaria is an instance. Other plants, as the Pelargonium, require to be more advanced. The moment is to be seized when the stigma of one flower, and the pollen of the other, are in perfection.

Flowers intended to be crossed should be secured against the intrusion of insects *before* they become developed, and this protection must be continued till *after* there is evidence of impregnation being effected.

It is not requisite, as often stated, that the flowers on both parent plants should be as nearly as possible in the same stage of advancement; it has been ascertained that pollen may be kept for any reasonable period, and when there is a store of pollen it is only necessary that the stigma should be properly developed — that is, fresh, and covered with its mucous secretion.

The anthers from the intended female flower should be removed *before* they are enough advanced to have burst their pollen cells, so that the pollen may not escape on to the stigma; a very small portion indeed of the natural pollen being sufficient to set aside any experiment.

A considerable quantity of the applied pollen should be used, it being less active than the natural pollen of the plant.

There must be a near resemblance, an accordance in general structure and affinity, between the plants to be crossed. Some are more difficult to cross than others, probably from the tubes of the pollen grains being too large to pass down to the ovary through the pistils.

It is not to be expected that every instance of attempting to impregnate flowers will be successful.

The number of fertile seeds is usually smaller in cases of crossing, than is natural to the particular kinds of plants.

Crossed plants being often less fertile, sometimes even sterile, are in the same proportion more luxuriant, and produce larger flowers.

Mule plants — that is, crosses between different species of the same genus, are usually either sterile, or become so in the second, third, or very rarely in the fourth generation. They may be fertilized by applying the pollen of either parent, and in that case assume the character of the parent by which the pollen was supplied.

The fertility of a hybrid seems to depend more upon the constitutional, than the botanical affinities of the parents; thus, Mr. Herbert found that Crinum capense, an aquatic, or swamp plant, impregnated either by C. zeylanicum, or C. scabrum, which affect drier habitats, produced offspring which during sixteen years proved sterile, while the same species impregnated by C. pedunculatum, C. canaliculatum, or C. defixum — all swamp plants, produced a fertile cross.

There is usually a greater probability of success with plants that have been accelerated by slight forcing, because there is less risk of the plants being fertilized by the accidental escape of the natural pollen.

Mr. Herbert found that in crossing some brilliant coloured flowers with others less showy, the seedlings produced flowers nearer the duller colour. This he attributes to (as he supposes) the climate being more congenial to the duller coloured parent; and he suggests that it would probably not take place in a climate more perfectly congenial to the more brilliant coloured parent.

Some of the best double-flowered hybrids —as of Camellia for example—have been obtained from single varieties impregnated by pollen from partly double flowers; that which is borne on a petal, or, in other words, on a petaloid filament, is to be preferred. Probably Indian Azaleas, in which they usually abound, might be obtained double in this manner. It is, no doubt, also important that the parent plants should be in a floriferous rather than a vigorous growing condition, if fine double flowers are desired. Pollen cannot always, though it may sometimes, be obtained from double flowers. Dr. Herbert observed a very curious morphological fact in the case of the

myrtle-leaved Camellia, which for twenty-five years he had never seen to bear an anther except in one season, when all the flowers on every plant had them; but the seedlings by this pollen proved the worst he ever raised; he concluded from this, that the same peculiarity in the season, which induced the approach to a single flower, also disposed the pollen to generate single flowers.

After all, the results which are obtained will frequently vary greatly from what are supposed to be the general rules which influence this question, affording thereby a certain proof that they are far from perfect. It is to be hoped that spirited horticulturists will turn more of their attention to this subject, and institute experiments upon a methodical and systematic plan, for so only can we hope to have the errors of our opinions and practice removed, and their place supplied by undoubted truth.

ANOTHER SUCCESSFUL MODE OF GROWING GOOSEBERRIES.

BY R. H. T., DELAWARE.

In an early number of the Horticulturist, I observed a notice of a successful mode of cultivating the gooseberry, in soils and locations where the *mildew* prevails so as to render it difficult or impossible to get good crops of this fruit.

The difficulty in growing the gooseberry, in this part of the Union, is, I suppose, wholly attributable to the want of a cool and moist atmosphere in the spring and early summer months. The bushes grow vigorously, and they also blossom and set fine crops of fruit; but the latter become covered with a thick brown mildew, or scurf, when they are scarcely a quarter grown. This, manuring and high cultivation will not in many cases remove; and, accordingly, we must look somewhere else for the remedy.

What induces me to believe that it is the hot and dry climate here which makes it difficult to grow the gooseberry, is the following observation which I made last season. I took a journey through Maine and New-Brunswick, and it chanced to be in the gooseberry season. I there found, to my surprise, that wherever the culture of the gooseberry was attempted it produced fine abundant crops of clean fruit. The mildew was wholly unknown, and I have never, (except in Great Britain,) seen such fine and large berries as I then saw in several private gardens in Maine.

Attributing the easy cultivation of the gooseberry there, as I have already mentioned, to the cool and comparatively humid climate of that state, it occurred to me that if we would succeed in growing this fruit in our gardens farther south, we must endeavor to bring about, as far as possible, the proper condition of the soil and site for its growth. As I was about to make a trial, I chanced to see the remarks of "A Jerseyman," in your journal, in which he so strongly recommends the use of a layer of salt hay underneath the branches. This appeared a good hint; its beneficial operation, as far as I am able to understand it, arising from the cool and moist temperature at which the earth about the roots was maintained,—thereby preventing that sudden check of growth which induces mildew.

Not having "salt hay" at hand, I cast about me for some substitute. This I found in the shape of a large heap of *sea-weed*, which had been brought up from the sea shore. I spread a layer of this sea-weed

underneath all my gooseberry plants to the depth of six inches, and in some cases to the depth of a foot. In the latter instances it had to be crowded down to make room for the branches; and, when the rains caused it to settle, it lay almost close to the branches. Of course, all this was done after pruning the gooseberry bushes, and before the fruit had yet attained sufficient size to be attacked by the mildew.

The experiment has proved quite successful. This year, for the first time in my remembrance, I have a very fine crop of large clean gooseberries, now nearly full grown, and not the least symptom of mildew. Those plants are most thrifty, and have the finest fruit, which had the sea-weed put in *thick layers* under them, so that the branches, in fact, rest upon the sea-weed. The fruit is then kept quite cool, and the dew remains a long time in the day. In consequence of this, the roots do not feel the changes of temperature, and the growth and swelling of the berry is not checked.

If this reasoning is correct, persons in the interior need not be at a loss, for refuse hay or straw would probably answer the purpose. On the prairie, where hay is so abundant, it may be freely used for this purpose. Respectfully. R. H. T.

Delaware, July, 1848.

TWO INSECTS THAT INFEST THE NATIVE GRAPES.

BY C., NEW-YORK.

Dear Sir—Every few years there appears some new insect enemy to the cultivator, that requires all his ingenuity and vigilance to prevent its destroying all the value of his labors. Little by little these pests spread over the whole country; their progress often being aided rather than prevented by careless cultivators, who allow them to have quiet and undisturbed possession of the garden or orchard under their care.

Two sorts of insects, that have made their appearance during the last two seasons on the hardy grapes—Isabella, Catawba, &c., now so generally cultivated in various parts of the country, come under this head of nuisances.

I am not familiar with the scientific names of these insects. They are, however, easily recognized by a brief description. One—the most troublesome—is, I think, a large sort of *thrip* or *aphis*, somewhat resembling the common aphis, or *green fly* of the rose bushes, but a great deal larger, and of a pale ash or grey-green colour. This insect is found on the under sides of the foliage, where it multiplies rapidly, and soon peoples the whole vine. Its effects are quickly perceived on the *foliage*, which puts on a gray, mottled and dingy colour,—its juices being sucked up by this species of thrip.

Vegetable physiologists would tell us beforehand that this robbery of the juices and green colouring matter of the leaf must impair the health and vigor of the vine. And plain gardeners that have had to do with this new insect, can testify from their own observation how much it impairs the health of the grape vine, and lessens the size and flavor of its fruit.

The other insect enemy is a species of small *black slug*, that also makes its appearance on the under side of the vine

leaves. If left in undisturbed possession, it devours the foliage almost as rapidly as the caterpillar. War must, in consequence, be declared against this slug immediately.

I am very much gratified, at the same time that I describe the new marauders, to be able also to say what sort of a dose they require to send them to the undertakers. By a little experiment, I have found that *tobacco water* is the best poison for them both, putting thrip and slug alike out of the way as soon as it reaches them.

The best mode of applying it is with a small syringe having a *rose* like a watering pot, or a small hand engine, such as is described in your last number. With this, and a pail of tobacco water at hand, a man can in a few moments thoroughly sprinkle the foliage of a large vine; always taking a stand so as to throw the shower on the under part of the leaves.

I find that strong soap-suds, applied in the same way, will kill the slug but not the thrip. It is best, therefore, when both insects are found together, to use the tobacco water, which quickly sickens and kills almost every insect. In fact, so useful is this latter stuff, that a garden should never be without it in the growing season. A quart of it, and two minutes' labor to apply it, will sometimes prevent the generation of a great brood of insects that days only will subdue. In the towns, the tobacconists always have a supply on hand; and, at any rate, tobacco stalks can be procured and boiled in water till a strong decoction is made. As both the tobacco water of the manufacturers and decoctions made at home vary in strength, it is always best, before applying it largely, to make the experiment by mixing it with water, and applying it to a few leaves—two or three dilutions. That mixture which is only just strong enough to kill the insects is the best. To use tobacco water stronger than this is only throwing away your ammunition, and might check or injure the growth of the vine. Your truly. C.

New-York, June 16, 1848.

THE RED DIAPER PLUM.

We find this valuable plum so little disseminated throughout the country generally, compared with many inferior varieties, like the *Orleans*, *Purple Magnum Bonum*, etc., that we are induced again to speak of its excellence.

This variety was received by us from England, under the name of the *Mimms* plum. The London Horticultural Society have, however, stated that the Mimms is synonymous with a French variety, previously known on the continent as the *Diaprée Rouge*, or *Red Diaper;* and the English title has, accordingly, given place to that by which it was first called. As we are not aware that the *Diaprée Rouge* of the continental nurseries, (which is scarcely considered a first rate variety,) has been proved in this country, we are for the present obliged to follow the authority of the London Society in the standard name adopted.

The variety before us has fruited here for several years past, and we do not hesitate to place it among the half dozen *finest flavored* plums known here,—a district where the plum flourishes well, and is very extensively cultivated. When we say, that, in point of flavor, it is not equalled by any purple plums, except the (*true*) ***Purple***

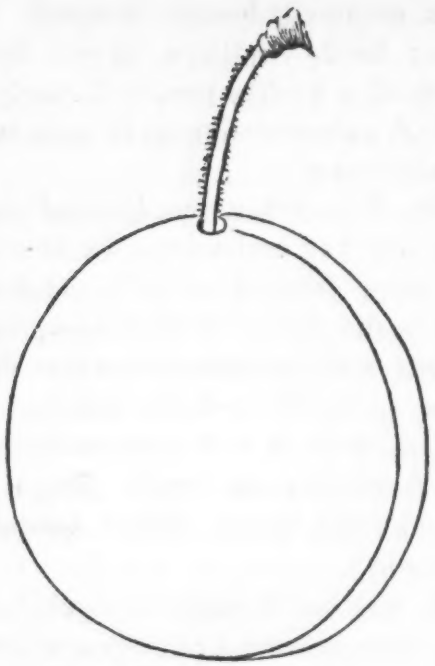

Fig. 1.—*The Red Diaper Plum.*

Gage, (a scarce sort,) and the *Purple Favorite*, it will be seen that we place it in the same rank as those highest standard varieties,—the *Green Gage* and the *Jefferson*. It is impossible to say more in its praise in this respect; but we may add that the flesh is melting, juicy, rich and delicious.

Like the *Green Gage* and *Purple Favorite*, the trees of this variety are rather slow growing in the nursery, though they are thrifty and hardy when planted out in the orchard or fruit garden. The leaves are rather small and oval, and the young shoots nearly smooth, or, more properly, semi-downy. In growth and foliage there is a marked resemblance between the *Purple Favorite* and the *Red Diaper*, though the fruit is distinct.

The Red Diaper is a good bearer, and the fruit usually hangs well upon the tree, being little liable to rot. It is easily distinguished from most purple plums by its uniform brownish-red colour, which, when the fruit ripens in the shade, predominates over the purple. The bloom is very thin, and of a pale blue. The stalk is rather slender, and slightly hairy. The fruit, which is a freestone, is at maturity about the end of August. We cannot recommend to those collectors of really *choice* fruits, who do not already possess this variety, any one more worthy of attention than the Red Diaper Plum.

TO CURE THE PLUM TREE KNOTS.

BY C. REAGLES, SCHENECTADY, N. Y.

Dear Sir—As the question of the *Black Knot Excrescence* has not yet been definitely settled, and as the subject—which I am sure is an interesting one to all cultivators of the plum—has been little alluded to of late, I have concluded to give you a brief statement of my experience upon the matter; having extensively cultivated the fruit, for the last fifteen years, with great success.

It is generally supposed that the *knots*, or swellings, are caused by the attacks of an insect, and the idea of the curculio being that insect has been pretty well disseminated. My own experience, however, goes to prove that the idea is far from being a correct one, as there really is no evidence to substantiate it. This is, as you know, a celebrated plum district. The trees are generally loaded with fruit every year, and

are never troubled with the curculio; yet many of the trees belonging to a neighbor of mine are covered with knots, and I am under the necessity of cutting them off my own trees annually to keep them from the same condition. It appears evident, therefore, in fact I may say conclusive, to my mind, that the excrescence is not caused by the curculio; because, supposing that insect to be prevalent here, it is not at all probable that they would attack the *bark* in preference to the *fruit*, as the knots continue making their appearance as long as the sap is in motion. I have, until quite lately, been under the impression that it might be caused by some other insect. I therefore watched the trees quite closely, but have never discovered any insect feeding upon, or depositing its eggs in the bark of the tree.

The fact, that the *larvæ* or the eggs of one or two insects are sometimes found in the *knots*, is no evidence of the insect being the cause of the disease; since the *larvæ*, or the eggs, as the case may be, are not to be found when the swelling first appears, nor until it has become quite large and pulpy.

I have, in consequence, arrived at the conclusion that the disease is not attributable to the attacks of an insect. It is nothing more nor less than an impure state of the sap, caused by the introduction of some improper food, of a virulent and contagious nature, into the circulation through the agency of the roots or leaves.

Or, it is an ulcerous habit, peculiar to those varieties of the plum, with coloured fruit, which makes its appearance in the infancy or at an advanced age of the tree, according as it may be infected. In support of these views, I shall state the following facts:

1st. Suckers taken from the roots of a badly diseased tree, will, without exception, eventually become diseased. On the other hand, seedlings, grown from the seeds of a healthy tree, will rarely be affected, unless contiguous to trees in an unhealthy state.

2d. Buds, taken from diseased trees, and inoculated on healthier stocks, have become so much infected as to be cut down, entirely, the first year after being operated upon; while in other cases where the trees, from which the buds for inoculating were taken, were in a healthy condition, quite the reverse was the result. They remained healthy and sound. This I have tried repeatedly.

It may not be amiss to state, here, that the trees bearing light coloured [white or yellow,] plums are seldom affected, and never unless immediately surrounded by diseased trees of the dark coloured varieties. [This is perfectly true, except when the disease is very wide-spread and neglected; the yellow sorts *are then attacked.* Ed.] I could adduce many other similar instances favorable to my conclusions; but I shall, at present, after proposing a remedy which suggests itself to my mind, leave the subject to some more skillful cultivator who may take advantage of the above hints.

The remedy which I propose is to *cut and keep cutting*, as long as the knots make their appearance, covering the wounds thus made with Mr. Downing's solution of gum shellac, at the same time freely watering with copperas (*sulphate of iron*) dissolved in water, at the rate of one ounce of copperas to two gallons of water. This may be considered rather strong; but the trees will bear it. It is a very powerful disinfecting agent. I have seen it used with great success on trees which were given up for dead. It possesses some potent vital principle, of which I am not suf-

ficiently versed in *materia medica* to explain. I became acquainted with it several years since in perusing an extract taken from a *French Journal*. I have since spoken of it to my friends who had sickly trees, who have proved its extreme efficacy in restoring them to their former luxuriance.

Respectfully yours. C. REAGLES.

Schenectady, N. Y., June, 1848.

[See, also, our own experiments with copperas water, p. 532, vol. II, of this journal. ED.]

HINTS TO CULTIVATORS OF THE PEAR.

BY A MARYLAND SUBSCRIBER.

I HAVE observed, in the Horticulturist, that you think the pear tree more tender or delicate in its bark and wood than most other fruit trees usually considered hardy. Hence it is more liable to injury by the frosts of winter, or the heat of summer, than even the peach or nectarine.

This opinion has been also entertained by me for several years, and I have made some experiments based upon it, which, if you please, you may lay before your readers.

Observing, about eight or nine years ago, the bad effects which long continued dry weather had upon some dwarf pear trees growing in my garden, I determined to endeavor to protect them if possible against the violence of our extremes of temperature, both of summer and winter.

After various trials, I have found that the best mode of attaining the desired object, is to make use of coverings—either straw or coarse salt hay. Where the latter is readily obtained I should give it the preference; but straw answers the purpose equally well.

My application of the covering of straw or hay is a very easy one. Considering the roots and the trunk the points most needing protection, I begin by binding a lining of straw somewhat loosely round the whole trunk as far up as it can easily be extended. "Straw-rope" has a still neater and better effect.

I then cover the surface of the ground under the tree, so far as I judge the roots to extend, with a layer of straw, six inches thick. To give it that clean appearance which it should have in a well ordered garden, I fasten it down with four small poles, laid upon it so as to form a square, and fastened with four hooked pegs, driven into the ground to confine the poles to their places. After these poles are fastened down, the ends of the straw, that project, can be cut off regularly about six inches beyond the poles.

Five years have elapsed since I first began to protect dwarf pear trees in my garden in this way. I assure you I have found it of such manifest advantage, that I cannot too highly recommend it to yourself and your correspondents. I think I have tested it with all possible fairness, as I have *straw*-ed every *alternate* tree, in a long row of dwarfs, and have therefore been able to judge very positively of the good effects of this protection against the extremes of temperature.

The trees that have been *straw*-ed, when compared with those left in the usual state, exhibit the following evidences of the benefits of this treatment.

In the first place, the foliage is of a

darker and healthier green, and the annual growth is more regular and vigorous. These effects I attribute to the preservation of a uniform state of moisture and coolness about the roots, in the place of the great alterations from cold and wet, to dry and parched soil, that often rapidly succeed each other in this climate.

In the second place I have never, with a single exception in forty-three trees treated, had a case of winter-blight in trees whose trunks and roots were well protected with straw; while I have had nine cases in a year in a row of thirty-five trees not protected.

I am also confident that the dwarf pear tree is rendered longer lived when protected against the too sudden changes of the atmosphere in this way.

The bark of the trunk swells gradually, as the tree increases in size, and remains tender and smooth till old age, instead of becoming dry, hard, and cracked, as is otherwise too often the case.

I will add, in conclusion, that I find it necessary to renew or replenish the covering of straw, on the ground, every year in the spring. That upon the trunk usually lasts two years. When laying down a fresh coat of straw, I also lay two or three tobacco leaves, or a handful of tobacco stalks, around the collar or base of the trunk. This I find keeps away insects that might otherwise be inclined to harbor and make their nests there. I am, sir, with respect, A Maryland Subscriber.

June, 1848.

THE DISEASES OF THE PEACH TREE IN WESTERN NEW-YORK.

BY J. W. BISSELL, ROCHESTER, N. Y.

Dear Sir—In discussing with a Boston nurseryman, the subject of the diseases to which Peach trees are liable, and especially the *Yellows*, I took the position that trees raised in this vicinity and removed thither, would maintain their health for a long time, and probably entirely escape the Yellows, if properly treated; and I thought that trees raised there, on soil to which lime had been applied, and from pits and buds from this vicinity, would also prove healthy. To test the matter, I sent him this spring a barrel of pits, and at the proper season, shall send him the buds with which to work them.

Trees one year from the bud, grown here, are not so large as those of the same age raised in New Jersey or Delaware; but the distance between the buds is short, and the wood is hard and perfectly matured. This I consider of great benefit, for the nursling is then sent out into the world with a good constitution, and better able to resist any unfavorable influences of soil or climate. The *Early York*, (serrate leaved, known here as the *Early Purple*,) in good soil, grows from four to five feet high, and from one to one and a-half inches in diameter the first year; and the *Oldmixon*, one of the freest growers, will be from one to two feet higher, though no larger at the ground.

We all know, that the trees which bear late peaches, are much more vigorous and hardy than the early varieties, and of course the pits from the former are much better to plant for stocks. The large nurseries here use these best pits, purchased in quantities from the neighboring farmers, who raise large late peaches for drying.

We find that our best and highest flavored peaches are raised upon our light land, but such land is all suitable for the cultivation of wheat and other grains, and although it does not produce the largest crops, they are uniform, the straw is short and firm, the heads well filled, and the kernels plump. A careful analysis shows a fair proportion of lime and potash in all our soils, though in our sands there is not much organic matter. To the presence of these minerals, I attribute much of the vigor of our trees, and the deep green of their foliage noticed by you. In the nursery with which I am connected, (the Rochester Commercial Nursery of Bissell, Hooker and Sloan) there are peach trees, twelve years old, with bark as smooth as that of a young cherry tree, and tops as handsome as could be wished. This smoothness of the bark is maintained by annual washings with soap, and the heads are kept in order by the shortening metnod of pruning so highly recommended by yourself and others.

I have lately seen peach trees here, about thirty years old, that have always produced good fruit, though of late years not in great quantity; it was, of course, at the tips of the branches, and required to be *shot off with a gun*, or brought down by a violent shake, neither of which methods of gathering are considered best in all circumstances, though they are sometimes adopted from necessity. When trees thus badly pruned, or rather never pruned, are not more than ten or fifteen years old, they may be renewed by sawing off the limbs just above their junction with the body, and covering the wound with the solution of shellac; in most cases new shoots will start, and a fine growth of young wood be formed which will bear fruit "within hailing distance."

It can hardly be our climate that keeps the peach tree in health, for among the thousands brought here from New-Jersey, I have occasionally seen some that were affected by a disease corresponding with the descriptions of the Yellows, but they were few, and invariably those set in grass land. When, at my suggestion, the turf was all well spaded in, as far as the branches extend, and the ground thus far kept well cultivated, the trees recovered.

If some of your correspondents in New Jersey will send me, by express, some of the wood of a tree that has died of the Yellows, and some of the soil on which it grew, I will upon the return of Dr. Lee, (the able editor of the Genesee Farmer,) from Augusta, have an analysis made of the same, and compare it with that made from the ashes of a tree grown upon land, of which the parts are:

Alumina.	4.15
Oxide of Iron,	3.41
Silica,	78.00
Organic Matter,	8.06
Lime,	2.18
Potash,	1.17
Magnesia,	0.31
Other minerals in small quantity & water,	2.72
	100.00

This soil will produce thrifty and handsome nursery trees. But I find the *lime and potash* will thereby be reduced about one quarter, *and must be renewed* for another good crop. This is not as absolutely necessary for standard trees in the orchard, whose roots extend for a great distance in all directions, as for young trees, although it is of very great benefit to them.

I have never seen an analysis of the wood of the peach tree, but the loss of *lime and potash* in soils where numbers of them have been grown, shows that these minerals enter largely into their composition. May not the diseases so feelingly described by some cultivators, be attributed to the absence or

small quantity of these alkalis? I can find no diseased trees about here upon which to try experiments with unleached ashes and lime, and must leave that to others more(?) fortunate.

I gave you* some idea of the prices at which peaches were sold in this market. Within a year or two these rates must become less, from the number of young trees just coming into bearing; at the same time, the profit to the grower will be greater. Formerly he was obliged to market his own fruit, and not being able to be in two places at the same time, his attention was divided; either some good bargains were lost, or while he was negotiating, his fruit would not be properly cared for at home. Of late, a new class of *middlemen* has sprung up, fruit merchants, who contract for whole crops, and run their own risks of sales. This has been found to be of great benefit to producer and consumer—the market is much enlarged, and the demand is regular because the supplies are regular.

Were the practice of naming all first rate seedlings adopted, a long list would soon be made. From the *Royal Kensington* many have been raised not distinguishable from the parent. These are ordinarily called "rare-ripes," with often the local name of the grower. A greater number have been raised from the *Yellow Alberge*, generally superior to the parent; the best of these is called the *Early Barnard*, from the man in whose garden it grew.

We have thus far had a favorable season, and the prospect is, that all fruits will be abundant. Yours, truly,

J. W. BISSELL.

Rochester, N. Y., June 12.

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REMARKS.—The foregoing is full of valuable suggestions. That Mr. BISSELL is correct in his explanation of the healthy condition of the peach tree in Western New-York, we entertain not the least doubt.

The soil of Western New-York, as compared with that of most of the sea-coast, abounds with lime and potash. Long cultivation has in a great degree exhausted these most essential inorganic manures from the older soils, and the peach tree is therefore much more short-lived and liable to disease in the latter than in the former localities.

Mr. BISSELL, with most commendable enterprise, has taken pains to have analysis made of the soil about Rochester. What he states of the rapid abstration of lime and potash from the soil by a crop of young peach trees, fully proves that these trees will soon exhaust these elements so necessary to their perfect growth and health in any soil. Is it then, any longer surprising that in these very soils on the sea-coast, where the peach was once the most luxuriant and prolific, it is now a comparatively feeble and short-lived variety of fruit trees? *Potash and lime* have been taken up by each succeeding crop for twenty years, and have been only very scantily returned to the soil by the ordinary application of animal manures.

Experiments made under our own eyes, for the last five years, have convinced us that *wood ashes* are, on the whole, the very safest and best manure for the peach tree. They not only promote the growth of the tree, but they give its wood a firmness, its leaves a dark, green healthy colour, its fruit a high color and flavor, and the whole tree constitutional vigor. The secret of this is to be found in the lime and potash, which are the principal components of wood ashes.

We stated it as our opinion, in the first edition of our *Fruits*, that the *Yellows* is nothing more than a constitutional debility, resulting from carelessly cultivating the

* Hort. vol. 1, p. 235.

peach tree on an exhausted soil. The admirable condition of the peach tree in Western New-York, and Mr. BISSELL's explanation of it, we think fully corroborates our opinion.

We may add that we have had abundant proof that it is only necessary to get the stones of peaches from a perfectly healthy district, plant them in *properly prepared soil*, and bud them with healthy varieties, to eradicate the Yellows. This course has been pursued in this neighborhood for ten or fifteen years past. When it was commenced, the Yellows was very prevalent in and about Newburgh—now it is almost entirely unknown, and all the gardens about us abound with healthy trees having high-flavored and delicious fruit.

We hope some correspondent interested in this subject, will do Mr. BISSELL, and cultivators generally, the favor to send him the specimens of wood of the peach tree thoroughly diseased of the *Yellows*, for analysis. ED.

A PEACH ORCHARD RESURRECTION.

BY J. W. DWINELLE, CAZENOVIA, N. Y.

A. J. DOWNING—DEAR SIR: Some 17 or 18 years ago, a row of Peach trees of a dozen or more, situated on the farm of the late E. S. JACKSON of this place, bore fruit so abundantly that they were all broken down and ruined. That fall, a heavy plow passed over the field, burying the wreck of broken limbs, venerable roots, and numberless peach *pits* deep beneath the surface. It was then *seeded* down to grass, and the next season, there was nothing there even to suggest the idea of a controversy as to whether peaches would grow on our sky approximating hills or not, such an unbroken field was there of timothy and clover! A heavy sward was soon formed which forbid the formation of anything beyond the *herbaceous*, and if there were germs below, it was a secret of the grave, deep in its bosom buried, which nothing but a resurrection could unfold.

Thus matters rested, and thus was the ground unbroken, until two years ago, when another plow, 'well beamed and driven,' inverted the surface again, studding the ground for rods around with pits—not *bottomless*, but from the bottom! These gave a tolerable crop of *peach trees* last season and considering the fact that the frost had not had a fair chance at them, as good as could be expected. This spring, saving the irregularity of their arrangement, the whole ground in that locality mostly resembles a young nursery of peach trees. By slightly removing the surface at almost any point, you can find pits looking as fresh as those of last season, all of them as ready for a *start*, as though they had not just awakened from a *Rip Van Winkle sleep* of fifteen years or more!

I know that the seed of Egyptian wheat has been preserved for 2,000 years, and that the germ of forest trees, is secure in the ground for an indefinite period of time. But the manner of preserving wheat so long may have been one of the lost arts of the mystic people of the Nile, besides too, when found, it was in such decided proximity to its spicy and well rosined possessor, that it must have been at least half *embalmed!* And then the forest trees are but 'children of the forest,' having primeval and undisciplined ways of their own, subject to but little of the *tasteful* refinement and book

rules that encompass the growth of the peach, so that the analogy would fall short of being complete!—at any rate, are not the facts as recorded above remarkable, and if so, how may they be accounted for?

Very respectfully, yours, &c.,

Wm. H. Dwinelle.

P. S.—In the July No. 1847, of the Horticulturist, p. 47, is a communication from "C. S." of Newport, N. Y., on the subject of '*protection against late frosts*,' wherein he very judiciously recommends artificial means for that purpose, such as the building of fires, and the accumulating of smoke in the vicinity of fruit trees, &c. &c. This brings to mind a novel incident that occurred in our vicinity two or three years ago.

A large drove of cattle applied to one of our farmers for "food and rest" late one cold evening. The farmer could only accommodate them by turning—or rather *cramming* them into a small orchard. That night there came a frost, with such a degree of *earnestness* that it cut off our whole apple crop for a great distance around; not an orchard bore fruit that year, except the above mentioned farmer's; his alone escaped, and bore abundantly.

He very naturally attributes the protection, to the animal heat and steam, arising from the large *pen* of cattle, which he was so fortunate as to secure for *that night only!* W. H. D.

Cazenovia, N. Y., May, 1848.

ORNAMENTAL VASES AND CHIMNEY TOPS.

We have lately made the acquaintance of a new material for architectural and garden decorations, which, we think, promises to be valuable to those of our readers engaged in building or improving tasteful houses and grounds.

We allude to the *terra cotta* ware, made at the Garnkirk works, Scotland, and which is now largely imported and offered at very moderate prices by the agents in this country.

This terra cotta is, in texture and composition, similar to the very best fire brick. It is, therefore, indestructible by fire, and very durable in the open air. When exposed to the weather it does not crumble, like articles made of Roman cement. We were shown some specimens, in Boston, which have been in use in most exposed places for six years, and are as perfect as at first.

A great variety of articles are made by the Garnkirk company, including *tessellated paving tile, pipes for conveying water, ornamental balustrades*, &c. We shall, however,

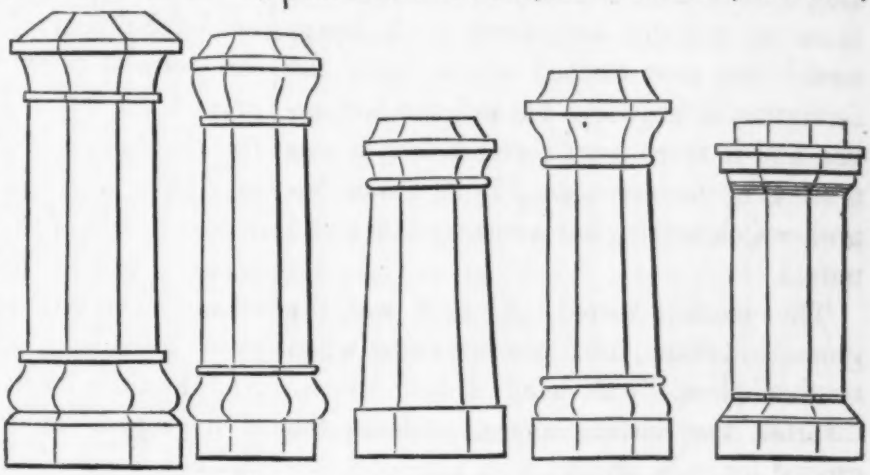

Fig. 2.—*Five Small Sized Chimney Tops.*

at the present moment, confine our notice chiefly to two articles most in demand in the United States,—*chimney tops* and *vases*.

The cottage ornée demands something more tasteful than the clumsy old form of the common brick chimney. To separate the square mass into a stack of distinct planes, each nicely moulded and proportioned, is to give a lightness and elegance to the chimney, which constitutes one of the leading features of English rural architecture.

It has hitherto been difficult to build handsome stacks of ornamental chimneys in this country, partly because we have, as yet, no bricks moulded in the proper forms, and partly because the chimney tops, hitherto made in Roman cement, are not found to stand the climate of the northern states.

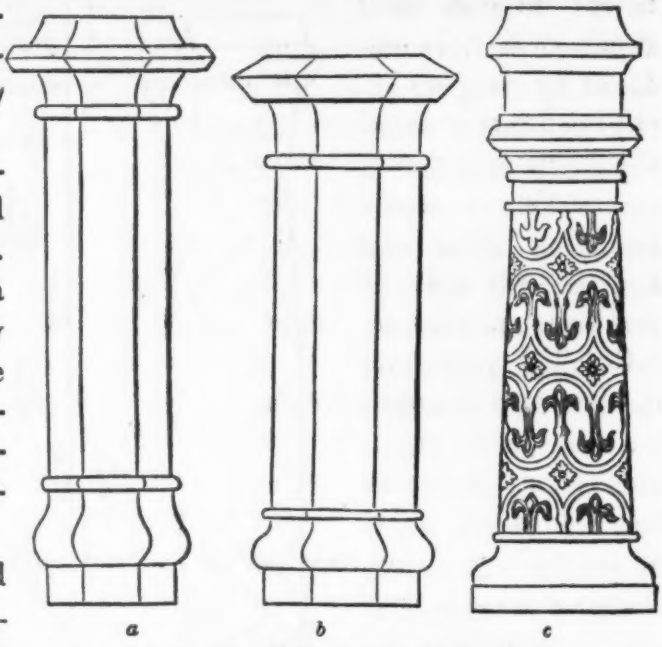

Fig. 3.—*Three Medium Sized Chimney Tops.*

As we have made some inquiries of a disinterested builder, who has pretty thoroughly tested the Garnkirk chimney tops, in situations exposed to the utmost vicissitudes of summer and winter in the northern states, we have little hesitation in recommending this material to very general use. It is of a very agreeable drab, or fawn colour, naturally, and may be painted so as to correspond with the hue of any building upon which it is used.

These chimney tops are made in a great variety of patterns and sizes, to suit houses of different dimensions. Fig. 2, shows five forms of chimney tops, for cottages of small size. Thus, *a* is 2 feet 8 inches high, *b* 3 feet 6 inches, *c* 3 feet, *d* 3 feet 3 inches, *e* 3 feet 4 inches. The prices of these range from $2.25 to $3.25 each.*

Fig. 3, represents three forms, also suitable for Gothic cottages, but of larger size. The heights of these are as follows : *a*, 4 feet 9 inches; *b*, 4 feet 6 inches; *c*, 5 feet. Prices from $4 to $6.75.

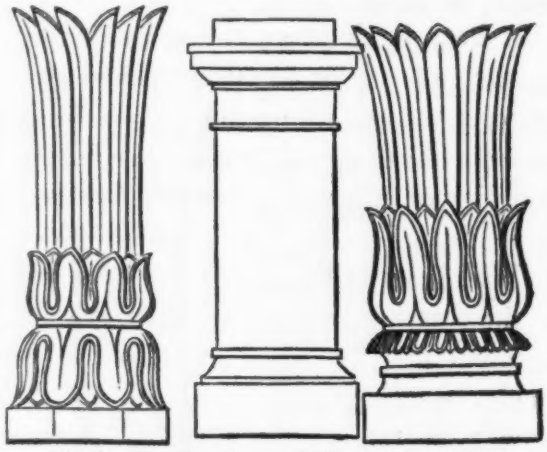

Fig. 4.—*Three Grecian or Italian Chimney Tops.*

Fig. 4, shows three forms of chimney tops, suitable for small cottages in the Italian or Grecian style. They are only 3 to 4 feet in height, and cost from $2.75 to $5.50 each.

Figs. 5 and 6, show eight richly ornamented shafts, in the Elizebethan style, copied after some of the finest antique specimens. These are each 6 feet high, and are admirably adapted to ornamental villas of the first class. Some of the richest effects,

* We give *prices* for the accommodation of our western readers and correspondents.

in old English rural architecture, were produced by grouping various patterns of chimney shafts together in one stack, as represented in these two figures. We have, as yet, seen no successful attempt to construct them in this country; but now, that the Garnkirk ware is found to bear our climate, it will be easy to add to the beauty of an ornate cottage by groups of chimneys like these.

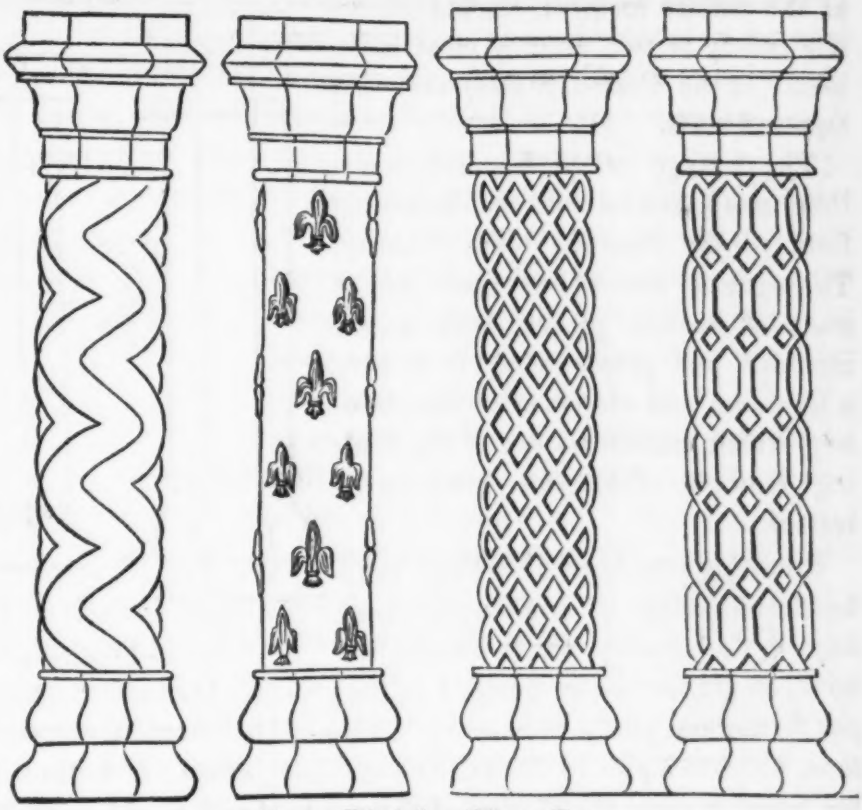

Fig. 5.—*Elizabethan Chimney Tops.*

We say, an *ornate* cottage,—for it must be continually borne in mind, in all the decorations of rural architecture, that the degree of ornament should be proportioned to the class and description of the edifice. Thus, it would be in bad taste to put a highly decorated chimney top, like *c*, Fig. 3, on a very plain cottage. It is only upon a cottage where the veranda, the windows, the gables, &c., are all proportionally decorated, that a rich chimney shaft can be correctly used. *Harmony of decoration* in a building has, or should have its laws; and it is no more tolerable

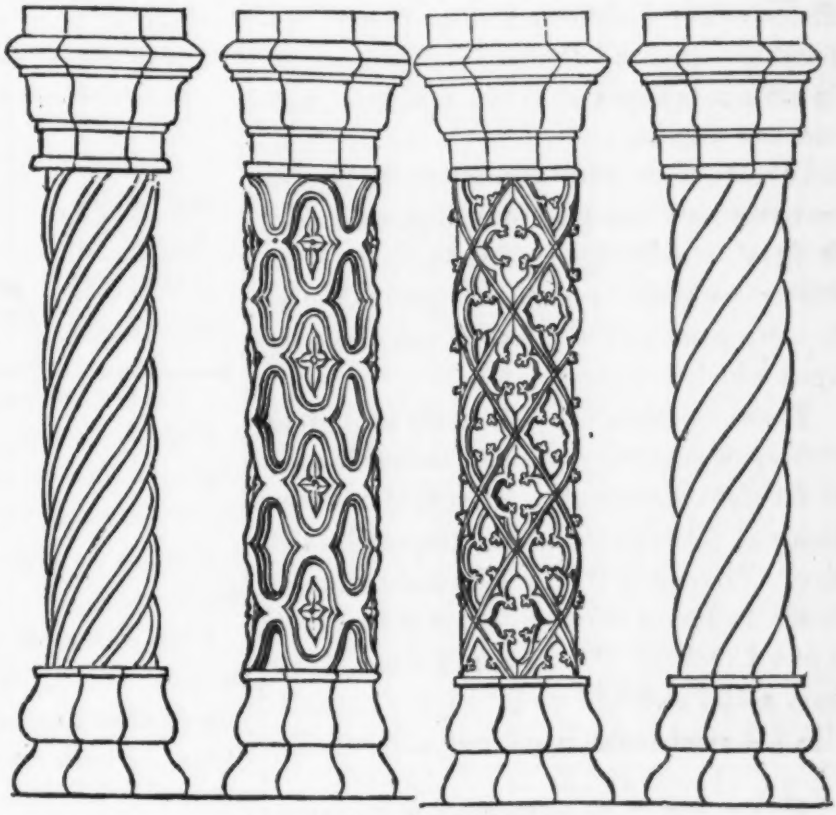

Fig. 6.—*Elizabethan Chimney Tops.*

that a builder should put very rich chimney tops on a bald and meagre cottage, than that a hatter should put a plumed chapeau-bras on the head of a day-laborer.

Fig. 7.

There are few objects that may, with so much good effect, be introduced into the scenery of pleasure grounds, surrounding a tasteful villa, as the *vase*, in its many varied forms. The terra cotta vases of the Garnkirk company exhibit pleasing forms, and a soft mellow shade of colour, which harmonizes admirably with the hue of foliage and turf. From among the variety manufactured by them, we have selected a few, of which we here present engravings.

Fig. 8.

Fig. 7, is a pleasing pattern, ornamented with foliage. There are three sizes of this pattern; the smallest being 2 feet high, and costing $5.

Fig. 8, is a new vase, ornamented with a wreath, and is generally admired. The height is nearly 3 feet, and the price $6.

Fig. 9.

Fig. 9, is a classical vase of pure and simple outline. It is 3½ feet high, and costs $10.

Fig. 10, is a copy of the celebrated Warwick vase, 4 feet wide and 2½ feet high.

Figs. 11 and 12, are classical vases, upon *pedestals*, as they should always appear when placed in any part of the pleasure grounds. To set down a vase upon the earth, or the lawn, without any pedestal, is to give it a temporary character, and to rob it of that dignity and importance which it gains, both to the eye and the reason, by being placed on a firm and secure pedestal.

Fig. 10.

Fig. 13, represents a pair of *tozza* vases, for a fountain. The measurement of the whole 10 feet high.

Looking at the vase in an artistical point of view, it is considered as performing the office of uniting the architecture and the grounds of a complete country residence. It is the architectural idea, carried a little beyond the house, and shows that the same feeling of taste and embellishment reigns in both departments of the residence. It will be easily understood from this, that the most suitable place for vases is in highly kept portions of the pleasure ground,

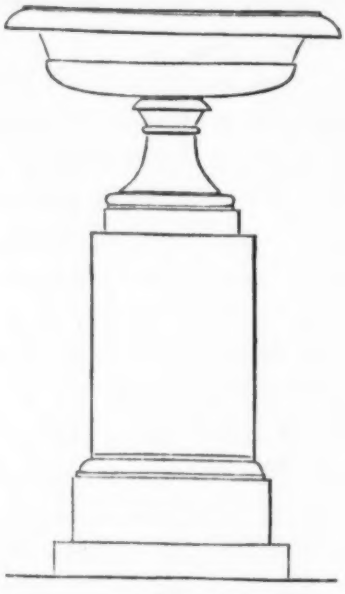

Fig. 11.

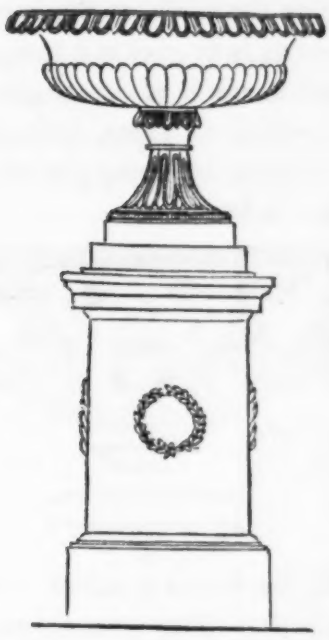

Fig. 12.

near the house, where the vases may be seen in connexion with it; or, at least, where the architecture of the building harmonizes with the highly artificial forms of the vase. The simplest cottage may have its vase; but, where the building is small, the rustic vase, made of bits of wood, and filled with flowing plants, is in better keeping than those made of any more highly artificial materials.

Mr. Loudon has written so ably on the employment of vases in gardens, both in the town and country, that we cannot do better than to give his remarks in conclusion.

"From the influence of fixed and elevated vessels, or other permanent structures, for containing plants, in giving consequence to them, has arisen, not only the employment of stone vases, but even of that description of rustic baskets and vases, for containing flowers, now frequently placed on lawns in extensive pleasure grounds, and which are particularly suitable for cottage gardens. But the satisfaction which rustic vases give, in such situations, is far inferior to that produced by fixed stone vases in town gardens; because, in the latter situation, flowers of any kind are comparatively rare and cherished; whereas, in extensive pleasure grounds in the country, where there are beds of Pelargoniums, and other flowers without end, it seems almost needless profusion to elevate them in vases. Hence it is, that when stone or pottery vases are introduced into gardens in the country, they are very seldom filled with plants of any kind. They are introduced there as beautiful works of art, to give pleasure, by their contrast, to the beautiful works of nature with which they are surrounded.

"Another reason why vases of flowers should be introduced into the little walled gardens of streets is, that they harmonize admirably with the masonry and architectural forms with which they are surrounded. For this reason, also, stone vases should be *sparingly* introduced into pleasure grounds in the country, except as appendages or ornaments to architecture; such as on the parapets of terraces near the house, on the stone borders, balustrades, etc., of architectural flower gardens, &c. They should never be set down on the naked ground; and, above all, they should always have a fixed and permanent character. This character is given when a flower pot or vase is set on a wall, so as to form a termination to piers, pedestals, pilasters, or pillars of any kind; but place it on the coping of the wall, in the interval between such piers, &c., and its character becomes at once temporary and unmeaning; because there is no obvious reason for placing a vase there at all; for limiting the number to one; or for not moving it to the right or left, or even for not taking it away altogether.

"If it be asked, why use vases in the country at all, unless plants are to be put in them? The answer is, they are employed as appropriate ornaments, as beauti-

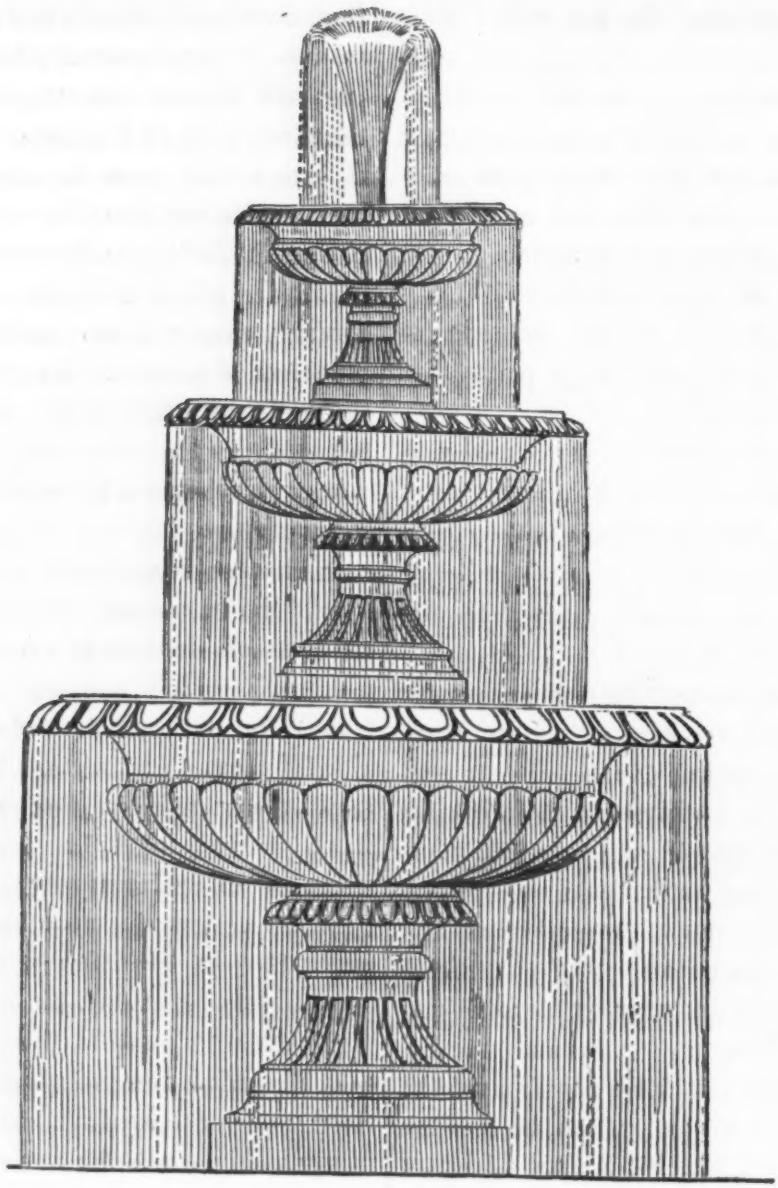

Fig. 13.

ful forms, and as articles of rarity, and of value. But it may be further asked, can an article be beautiful, or confer ornament on another object, when it is itself of no use? Certainly it can. The noblest ornaments are those which are without use, in the common sense of the word; though in the sense of art and refinement, everything is of use which adds to the strengh of the emotion of the kind of beauty which it is desired to produce. What would be the splendor of the drawing-room, or the effect of the picture gallery without gilding? or an assembly of highly dressed beauties without those useless articles,—diamonds and other precious stones? Nature has planted in the mind of man, from the rudest savage to the most refined philosopher, a capacity for deriving pleasure from beauty. It is necessary that this want should be supplied; and it will be found gratified, to a certain extent, in every stage of the progress of civilization; partly by objects which are useful in the ordinary sense of the word, as dress, &c.; and partly by such as have no other use than the power of

conferring ornament. In the rudest state of society, we have the tattooing and nose-rings of the savage; next, the ear-rings, scarcely less barbarous, of a more civilized period; and, though these must pass away with the introduction of a taste more truly refined, the necklaces and bracelets, which are common to all ages and countries, will probably continue to be so, so long as women dress highly, and large parties are given by artificial light.

"Another reason for the introduction of vases, and other architectural ornaments of a similar kind, both into town and country gardens, is, their tendency to create and cultivate a taste for natural beauty in the spectator; since, however paradoxical it may seem, it is, nevertheless, true that we can only be instructed in the beauties of nature through those of art. No person can either enjoy, understand, describe, or remember a landscape properly, who has not been instructed in drawing landscapes, any more than he could enjoy, understand, or analyze any particular style of writing without having been taught grammar and composition. Teaching a person to draw trees, for example, is teaching him to find beauties in trees which he had never seen in them before. Setting before a person beautiful vases, is to familiarise him with beautiful forms, which he cannot help contrasting with ordinary shapes; and according to his natural capacity, or the suitableness of his organization for discernment in forms, he will find in the vase a unity of tendency in the lines which constitute their outlines, a symmetry in their general forms, and a richness, an intricacy, and a character of art in their sculptured details, which will induce him to search for those qualities in other objects of art, and to observe every tendency towards them in the works of nature. To such an observer, the productions of architecture and sculpture would assume a new interest; he would gradually, and almost imperceptibly, acquire a knowledge of, and a taste for, the beauty of forms and lines in objects generally. He would thus learn to distinguish symmetry, regularity, unity, variety, and other abstract qualities in works of art, which he would probably never have discovered in the forms of nature without such assistance; though they exist there, and are merely imitated by art in a way which renders them more obvious to untutored man, who sees only that mind in other things which he understands and feels in himself.

"The last reason which we shall offer for the introduction of vases into architectural and garden scenery is, the gratification which such objects afford to the man of intelligence and taste. There are, perhaps, few objects, next to the human figure, which afford as many interesting historical associations as the vase. It may truly be said to be the first and the last production of the plastic art. The first utensil formed by man, in the dawn of civilization, in every country, is a vessel or vase for holding water; and that on which the highest resources of art are bestowed, in ages of the greatest refinement, is a vessel or vase for holding wine. In the first case, it is hollowed out of a gourd, or rudely shaped of clay, and dried in the sun; and in the latter case, it is manufactured of costly metals or precious stone; or if of common materials, such as stone, earthen ware, or glass, it is rendered valuable by the taste and skill bestowed on its form or its ornaments. The history of every country may be traced by its vases, no less than by its coins; and the history of all countries is set before us in the vases of all countries."

☞ Messrs. James Lee & Co., 11 Broad-street, New-York, and 18 India-wharf, Boston, are Agents for the sale of these articles in the United States.

FOREIGN NOTICES.

THE BEAUTIFUL GARDENS OF ITALY.—[The following is part of a letter received by a late steamer from one of our neighbors, who has left his country seat on the Hudson for a couple of years, to explore Europe and Asia. He looks at Europe so much with our own eyes, in a horticultural sense, and describes the perfections of Italian gardening so understandingly, that we are sure our readers will enjoy the following long extracts.—EDT.]

All I said against Italy in the winter, I will unsay of it in the spring. Nothing can surpass it in verdure and luxuriance. In Lombardy, especially, as far as the eye can reach, the most superb crops, the barley being higher than our horse's heads ; hill upon hill, mountain upon mountain, terraced to the summit, and the cultivation of the grapes as carefully fully attended to in the training up and tying, as in a *vinery* in America. And the roads—I do not think Mr. L——'s, (on the Hudson), the first hour after its spring draining and raking, can compare with them : richly gravelled, not a weed to be seen, on either side stone gutters, then granite posts every ten feet, then a double row of horse-chestnuts, (now in bloom), then a gravel-walk, then a closely shaven and verged turf border ; and this for 100 miles, to Milan ; and 31 miles from Milan to Como ; and in fact, all over Lombardy. The country is perfectly flat, and the roads, or rather avenues, straight, and would be monotonous, if one were not so charmed by the cultivation, and the most exquisite order. Not a wall or fence is to be seen, seldom a hedge,—the divisions being made by trees, (pollards,) of mulberry or poplar, whose summer growth generally does duty as fire-wood in winter.

But these divisions, or even fields, can seldom be much seen, from the density of the shade trees—chesnuts or lindens, that border the great roads. * * * * * * * Milan, itself, is surrounded by a noble, gravelled drive of 12 miles, bordered by a double row of horse-chestnut, now in full bloom and very magnificent. The celebrated cathedral here, far surpasses in richness and beauty all I have hitherto seen. Conceive of 7000 statues on the roof, on the different turrets and pinnacles, and the carved stone flowers that adorn the flying buttresses in 32,000 varieties! * * * We have been two days at Como, and I am convinced that I have passed last night and this morning at a spot never elsewhere to be surpassed in its glorious beauty. Hitherto I held up for the Hudson, but to-night we have come home to Como, heatful and disspirited ; for we have seen Bellagio ! I am almost tempted to say no more, for I can't describe it—who *can* describe Bellagio? I will merely say this, that you sail up the lake (which is 52 miles long) some 20 miles, through scenery wonderfully similar to the Hudson highlands from Caldwell's to Buttermilk falls, and about as wide as our river there ; but differing in this way ; where the dock is at Caldwell's, will be a terraced wall, springing from the water, surmounted by a heavy stone ballustrade. This again is crowned at its angles, and pilasters, with statues, or vases, with a double flight of stone steps, facing two ways, descending into the water. Back of this terrace is another, perhaps a third, with their walls towards the river *espaliered* with oranges and lemons, or with Lamarque and the true Banksian roses in a mass of bloom. Then rises a palace, crowned by a ballustrade and statues, and flanked by cypresses, ilex, Italian pines, mingled, towards the flower garden, with *magnolia grandiflora*, laurustinus, laurels, oleander, and purple beeches. These gardens leading through formal, but beautiful myrtle hedges, to *bosquets*, and finally to terrace upon terrace, with tiers of mulberry and *vines*, and so on, up apparently inaccessible hill sides, to the top of a mountain as perpendicular and higher than " Anthony's Nose." On the very apex will be perched, perhaps, a village of 60 or 100 houses, and its church of grey or yellowish stone and tiled roof. These villagers are tenants and tillers of the soil of the villa below. Imagine this existing all through the Highlands ; these villas differing in size and taste like our North river places : some with one terrace, others two, others with half a dozen. Some, on the contrary, immediately rising from the water, like Mr. Cruger's summer-house ; having in this case their terraces in the rear, and on the lake, canopied balconies overhanging it : sometimes, again, the village will be on the water, and the villa half way up the terraced mount. The mountains are generally much more elevated and more sharply pointed than our " Sugar Loaf," (the most conical of the hills on the Hudson); surmounted, perhaps, by a chapel, so inaccessible that you would think it built as a penance for those to visit it who live at its foot ; and this is sometimes actually the intention. We passed one to-day immediately *over* a village which it took 5 hours to reach. To convey to one at home some idea of the grouping here, you must place yourself in our Highlands, with, on the top of Breakneck a convent ; on the top of Crows-nest a village; half-way down, perhaps, another, the houses not scattered, but all huddled as close together as possible—20 houses and a church not covering as much space as 5 with us : a point like Stoney point would have a villa on its south and one on its north, and perhaps another on the point ; the gardens and terraces all running into each other by their terraced walls. On the highest ground would be perhaps a little village, or ruined, ivied tower. Every point you turn you come to a villa. a palace, or a town, snugly stowed away on a mountain, or a projecting cliff, like West Point, as if to be put out of temptation.

All these places are accessible only by boats or mule paths, for there is no beach or level ground. The mountain begins from the water. This is the character of all the Italian lakes.

After running up through this highland scenery of Como for two hours, you come at last to a pro-

montory, with a position very much like that of West Point, supposing that the Hudson, forked there, and one arm ran on each side. This is Bellagio, belonging to the Dutchess of Bologna. You stand on the top of this promontory and look down one lake, running 20 miles, to Como : and this view is similar (though finer, from the mountain, being higher and more delicate) to the view down the North river from Kosciusko's monument. When you look, as it might be, upon a point of the Hudson running between Crow-nest and the West-point dock, some 20 miles down the lake, to Lecco. You then look up, as if to Newburgh, and see about as far as Newburgh from West-point, [9 miles] the *Alps*, in snow-clad majesty. Opposite Bellagio, [as if at Cold Spring] is a magnificent villa belonging to *Fanny Ellssler*. As if at the foot of Crow-nest is the palace of the Princess of Prussia. As if at the West Point landing is Pasta's. As if at Buttermilk Falls, 2 villas and a large orangery of *Taglioni's* : further down, opposite [say at St. Anthony's Nose] is the villa *d'Este*, formerly owned by Caroline, Princess of Wales. All these we visited. Above and below are the villas of the Milanese and some English nobility. Many of these palaces and villas cost millions (even where labor is so cheap as here), filled as they are with costly works of art. At one, we saw this morning Thorwalsden's great basso-relievo of Alexander's triumphant entry, made for Napoleon's arch of victory, at the monument of the Simplon road.

And now comes my hardest task—to describe this promontory, Bellagio : I don't think it covers 5 acres, rising, conically, perhaps 600 feet from the water ; but the walks, which are gravelled or paved with very small stones, are 3 or 4 miles in length, most admirably managed with dense plantations, tunnels and bridges. The promontory, from the lakes, seems heavily wooded, and it is in parts, as dense as the wood at *Montgomery Place*, and yet every thing has been done by art. The deep shade is caused by the most charming undergrowth of cypresses, laurel, casuarina myrtle, and English yews. You enter through a cavern into a glen quite spectral in its midnight darkness, surrounded by immense Italian pines, and undergrowth of yew : You are then let down into daylight, and into a charming peep of one of the lakes by the most delicate gradations of dark to light, first going through not only the *co ors*, but also the changes of *form* of the following evergreens—cedars of Lebanon, pinus excelsis, deodars, and weeping larches, which actually wave and dance you out into the sun-light.

This is the only large specimen of the true *weeping* larch I ever saw. The full grown deodar (*Cedrus deodara*) is quite as pendulous as the weeping larch, and they harmonize admirably together. After these trees, you shortly commence, in the midst of a blazing sun, with the most feathery and delicate of the acacias, and grow cooler and darker with the coarser varieties, and the rose-acacia, all enchantingly entangled with the Chinese wistaria, which here flowers all summer. After struggling through purple beeches, and some other dark foliage which I could not find out, you get out again through a lovely *grove* of *araucarias, pinus excelsis, p. longifolia, and abies Douglassii* that I knew, and some 20 more that I never heard of, that actually threw me into an arboricultural phrenzy—at finding how far we are behind the time. From here we emerged into a little lawn quite surrounded by high cliffs, covered by superb plantations of aloes and bananas, pepper trees, scarlet and white horse-chestnuts, all in flower ; and a collection of rhododendrons, *dazzling* from their gorgeousness. This lawn is devoted to *magnolias* of every possible variety, of which some eight or ten sorts were in flower. The air was heavy with perfume. These were in single specimens, and in masses. You left this *oasis* by the only way it seemed possible to get out—a cavern in the rocks—through which you passed until you got into profound darkness ; gradually the light returned ; at last you reached a point from which two vistas opened. One down the lake to Como, the other down the lake to Lecco. You looked at these as at a picture through a darkened tube ; for the cavern was formed, apparently for this purpose. These tunnels lead you out to a walk bordered by natural rock, perhaps 20 feet high, covered by lamarque and the banksian roses, in such a profusion of bloom, that the rock had the appearance of being painted white and yellow. On the other side the walk was bordered by masses of choice azaleas, in every variety of color and flower, some 8 and 10 feet high. Passing a charming cascade overhung with weeping beeches, waving birches, and willows, the walk led through a maze of Judas trees, all the varieties of double thorns, the laburnum, purple and yellow ; and getting umbrageous and mazy again, with purple beeches, purple berberries, and purple filberts, come out again, clear and bright, through different varieties of heath and acacia, upon a little platform looking up the 3d lake and to the snowy Alps, and down a perpendicular precipice of some 600 feet, into an exquisite flower garden below, into which I was prevented from falling by a parapet interwoven with every variety of honeysuckle ! The other walk from the cavern led along a similar wall of rock pierced into holes, and filled with all the varieties of the cactus and aloe, with an occasional frame of rustic work covered with air-plants and parasites. This led by a grand terrace, ballustraded and statued, and commanding the three lakes, to the palace ; and here let me breathe, for I could scarcely do so last night and this morning, from wonder and delight ! .

Putting the wonderful views quite out of the question, Bellagio is the most extraordinary place I ever saw for perfect planting and rare collections. I have not mentioned a third of the rare trees, for though every thing is nicely *labelled* in zinc, the names were mostly in Italian, and the head gardner, who was English, was away. It is surprising, that a place like the lake of Como, surrounded by mountains mostly snow-capped, within 15 hours of the Simplon, should possess, of all places in the north of Italy, a climate allowing exotics to remain out in winter. * * * 14th May. The preceding pages left us at Como, which we left yesterday, coming to Lago Maggiore—sleeping at Arona. After dinner we walked up the hill to see

the famous statue of Carlo Borromeo, 72 *feet high*, on a pedestal 46 feet. The statue is of bronze, and is really immense. One arm is stretched out over the lake, blessing his native city. A bible, which he holds in the other hand, is 9 feet long. The countenance expresses the benevolent character given to the man; and the whole thing is in such admirable proportion that it does not seem so colossal, although the whole, (statue and pedestal,) is over 100 feet high. It is possible to ascend it inside, but dark and fatiguing. The head will hold 15 persons.

Lago Maggiore, at Arona, where we slept last night, is very lovely; much wider than Como, but not so picturesque. An idea may be formed by imagining a sort of mixture of Jamaica lake (near Boston) and the Hudson near West Point. The mountains, except on the Swiss (Alps) side, do not rise so abruptly as at Como. In many parts there are towns, or meadows, prettily dotted with trees and villas, and villages lodged between the water and mountains. Our saloon was a large one, with three French windows, opening to the floor, upon balconies overhanging the lake. From it we counted 7 villages, part in Lombardy, part in Piedmont, and one in Switzerland; for the lake is bordered by 4 countries. The sun had just set, and the moon—a full moon, rose over snow-capped mountains—Monte-Rosa, one of the highest of the Alps, while, from the different village churches, stole on the water, the vesper bells; the different modulations produced by the different distances across the water, gave the effect of *chimes*. It was charming; for the evening was soft and lovely.

Starting at 7 this morning, after a delightful ride of two hours, upon a road bordering the water by beautiful villas adorned with flowers and vases, we came to the Borromean islands—Isola Bella and Isola Madre: These are owned by the Count Borromeo, who resides in a grand palace on Isola Bella, for some 2 months in the year.

These islands, which, each, contains perhaps from 1½ to 2 acres, were originally mere slate rocks, lifting themselves a few feet from the surface of the lake, and were thus converted into beautiful gardens, teeming with tropical vegetation, by an ancestor of the present family in 1671. Isola Bella consists of 10 terraces, (the lowest founded on piers thrown into the lake,) and rising in a pyramidal form, one above the other, and lined with statues, vases, obelisks, and immense cypresses. Upon these terraces flourish, as upon the "hanging gardens of Babylon," not merely the citron, and orange, and pomegranate, but aloes, cacti, the camphor tree, (one specimen 20 feet high,) the sugar cane. 2 varieties of tea; and all this *within sight* of perpetual snow, and of the Lapland climate of the Alps.

The marvel in these islands is the fact, that every handful of soil was originally brought from a distance, and requires every year to be more or less renewed. And yet I saw as dense a wood, as high trees, and as luxuriant vegetation as I ever saw in my life. Among the most interesting things at Isola Bella, is a gigantic sweet bay tree, 8 feet in diameter, and the largest, the gardener told me, in Europe, upon which you can indistinctly trace the remains of the word "*Battaglia*," cut by Napoleon with his knife, a few days before the battle of Marengo.

Isola Bella is wonderful, but not interesting. The trees, magnolias, araucarias—many fine specimens; of our white pine, one superb specimen. The situation is lovely about a mile from the shore. The different views entertained of it as a matter of taste, are amusing. Brockden, in his work on Switzerland, says "it is worthy only of a rich man's extravagance, and of the taste of a *confectioner*": while Saussure says it is "un magnifique caprice: un pensée grandiose, une espéce de création." The money that must have been spent in its terraces, statues, fountains, etc. must be frightful! All these 10 terrace walls are covered in with espaliers of oranges and lemons, running round the whole island, and they are really beautiful, laden as they are with fruit.

Isola Madre, which is larger, and distant half a mile, is a gem. This is used rather as a garden or pleasure grounds for Isola Bella; it is laid out in the natural English style, with little bits of lawn of exquisite grass; almost everything that we have in green-houses supports the winter here: immense palms, aloes, larger than mine in the conservatory, (8 were in flower,) araucaria excelsa, 30 feet high, A. imbricata 16 feet; pinus longifolia, and some 10 other rare species, 15 to 20 feet high; splendid cedars of Lebanon; every species of green-house magnolia, with a dense undergrowth of English azaleas, 8 to 12 feet high, in a mass of bloom. One entire bank, half as large as your lawn, was composed of rhododendrons russellianum, catawbiense, alta-clareuse, arboreum and hybrid varieties, 15 to 18 feet high, with thousands of flowers; heaths, higher than my head, as undergrowth. One bed of Chinese azalea, 100 feet long by 5 feet wide, was the most gorgeously magnificent thing, in its way, I ever saw. It was one thick *blaze of bloom*. The Wistaria sinensis, trained as a shrub, 30 years old, with a trunk as large as a man's body, and a head as large as your Virgilia. Three or four fine double camellias, in flower, which are as high as the second story windows, branching from the ground; and a new variety of cypress, (cupressus glauca pendula,) weeping like a willow. One walk of pittisporums, in immense masses, terminates against a hedge of oleanders, &c. &c. The whole planting was deep and umbrageous, producing dense shade; the plants, many yews, &c. evidently being selected for this purpose, and the contrast to the tropical *hot looking* plants was very striking. Beautiful golden and silver pheasants, mingled with the foliage; and the whole seemed to me like some immense conservatory, with the glass taken away. H. W. S. *Geneva, 21st May*, 1848.

DOMESTIC NOTICES.

DESIGN FOR A SMALL COTTAGE—SEE FRONTISPIECE.—This extremely simple and well proportioned design for a working-man's cottage, is by Mr. JACKSON, an English architect, and was published in the *London Art Union*.

It is a good illustration of the fact that dwellings of the smallest size may be made tasteful, almost without ornament, merely by the adoption of pleasing outlines and proportions. The chimneys are especially neat, and characteristic, and the bracketted gablet over the door gives something of dignity even to this, the simplest form of entrance. The plan of this house in only given in words as follows: "The present subject comprises three rooms, with wash-house, tool shed, &c. attached as a lean-to against the (opposite side of) the building. The living room, fourteen feet square, is placed in front; and from two doors on the chimney side of the room, a bed-room, fourteen feet by twelve feet, and the kitchen, fourteen feet square, are respectively entered. The lean-to contains a wash-house, twelve feet by eight, and tool-shed, &c., eight feet by seven feet. The whole is on the most compressed scale, but is susceptible of much comfort. The estimated cost of this design is £120," ($600.)

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NORTHERN SPY APPLES.—*Dear Sir*: We send you, per express, a few samples of the *Northern Spy*, which, if you receive them in as good condition as now, will enable you to form an opinion as to their keeping qualities, compared with others.

We have had more in our market the past season than ever before, and yet the dealers sell them now at three to four cents each.

We have a fine prospect of fruit all around Rochester, and if nothing happens hereafter, the orchard crops will be large. Very respectfully, your obedient servants. *Ellwanger & Barry. Rochester, N. Y., May 31st*, 1848.

[We received the specimens mentioned above on the *third of June, in perfect order*, and, after testing their flavor, unhesitatingly rank this sort among the very first of late keeping apples. Indeed there is no apple of the same season which compares with this variety, except the celebrated *Newtown Pippin*. The latter fruit is different in texture, being firm, crisp and juicy, while the Northern Spy is tender, sprightly and juicy. There are, therefore, many persons, preferring a sprightly to a rich fruit, who would place the Northern Spy even as high as the Newtown Pippin. Certainly it is the most beautiful and sprightly of spring apples.

We find that this apple has been sold this spring, in Boston market, at $3 to $4 per barrel, and retailed (the finest specimens) as high as 12½ cents each! ED.]

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TRANSACTIONS OF THE MASS. HORT. SOCIETY, NUMBER 2.—Number 2 of this handsome large 8vo. pamphlet is in the highest degree creditable to the Society. It contains 4 finely colored plates, and descriptions of the following fruits: the Dix pear, the Tyson pear, the Andrews pear, and Downer's late cherry. These plates are finely executed, being engraved and colored by hand, and are far superior to those in the first number, which were done by the *chromolith* process, which the Society has abandoned.

Besides the description of these fruits, the number contains the three following articles, viz: On the Hybridization of the camellia, by Col. Wilder, (a very interesting paper which we gave entire in our last number); Analysis of the forms of the Pear, from the pen of the corresponding secretary, with 12 outline illustrations calculated to render pomological descriptions more definite, and a paper giving the "results of the cultivation of six kinds of garden pea," by J. E. TESCHEMAKER, Esq. The remainder of the number (77 pages) is filled with the business proceedings of the Society.

We understand that two numbers like the present will hereafter be issued annually. The beautiful manner in which these Transactions are published, certainly equal to the publications of any society on either side of the Atlantic, and the high position which the horticulturists of Massachusetts have attained for practical skill, must, we think, commend these Transactions to general favor.

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CLEVELAND CHERRIES.—We have received by express, just as the last pages of these notices are going to press, specimens of several of Dr. KIRTLANDS's seedling cherries, from Mr. ELLIOTT, of Cleveland.

Only one variety was in such a state of maturity as to enable us to form a correct opinion of its merit. This is "Kirtland's Mary," described in our last volume. a very fine large, obtuse heart-shaped cherry, well worthy of general cultivation. We hope next season to have all Dr. Kirtland's new cherries in bearing in our own grounds, when we can judge more perfectly of their qualities.

.....

THE POMOLOGICAL CONVENTION—*A. J. Downing, Esq.*—In the June number of the Horticulturist, I notice a communication from Mr. HANCOCK, of New-Jersey, and which was accompanied with some editorial remarks, on the importance and propriety of holding a convention of fruit growers in the city of New-York in the month of October next.

For one, I am much gratified to see a growing disposition manifested among fruit-growers and nursery-men to meet and compare fruits, and interchange views and feelings on this interesting subject. To compare fruits from all parts of the country will do much to correct the nomenclature of the various varieties of fruits grown among us. But this will not be the work of a day, or a year. Many varieties that are now said to be of recent origin, will no doubt prove synonymous with old and well established varieties.

A call for such a convention, to be held at Buffalo on the first of September next, has been widely circulated, and a number of fruit-growers and pomologists, from the east and from the west, have assured us that they would be present upon that occasion. This call was made before any notice had appeared elsewhere. The convention is to assemble on Friday previous to the coming off of the State Fair, and Cattle Show, also to be held at Buffalo. There cannot be a doubt but that a very large number will be present. and take part in the deliberations of this convention, and that much good will result from this convocation.

Under these circumstances, I would beg leave to suggest, that we hold but one convention this year, and that the convention for next year be held in New-York. What say you and friend HANCOCK to this suggestion?

However, should our eastern friends determine to hold a convention, as suggested, in the city of New-York in the month of October, I trust that western New-York, and the western country will be fully represented in such convention. We have much to do in this matter, and I am decidedly in favor of having such convention adjourn from year to year, and make it a perpetual institution. Yours, very respectfully. *B. Hodge. Buffalo Nursery, June*, 1848.

[The pomological convention to be held at New-York, has been in contemplation for some time, and a plan was suggested to us by the fruit committee of the Mass. Hort. Society while we were in Boston last April.

We believe materials can be assembled at New-York for a much more complete pomological convention than at any other point in the country. The pomological convention at Buffalo will no doubt be a highly interesting one, but it is impossible, from the position of Buffalo, and the comparatively recent attention to horticulture in the west, that the same amount of experience in pomology can be concentrated there as in a convention near the seaboard which will be mainly composed of the most experienced pomologists of New-England, New-York, New-Jersey and Pennsylvania. Let our western friends *crystalize* their experience at the Buffalo convention, and afterwards, by an able delegation, add it to the accumulated facts which will be presented at the New-York convention —ED.]

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RASPBERRY CULTURE.—I notice, with you, as in our more immediate neighborhood, there are many complaints made of the uncertainty of the raspberry crop, and of poor success with the canes. It is a difficulty we have never experienced ourselves, as the raspberry is by far the most certain yield of any fruit cultivated by us, not excepting the grape. We have tried them on all soils, and exposures, both north and south sides of close fences; but the situation which with us suits them best is in the open ground, in a DEEP *soil*, (*not necessarily very moist or damp*,) in rows as far apart in the rows as the rows are from each other; about the 4th of July, tieing each vine to a single strong stake We have tried a trellice and bars for each row, but find they do better tied singly in this way. The ground is covered with a heavy coating of manure in the fall, which is dug in in the spring, and we think it is a good plan to dig in along with it the trimmings of the vines.

The pruning is performed the early part of third month, after the heavy frosts are over, and consists simply in cutting out all but the preceding summer's wood, which is likewise shortened about ⅓ to ½ of its length. We find a great secret of raising fine large berries, is never to allow the vines to remain in one locality more than 5 or 6 years: every 3 or 4 years setting out fresh plants (suckers) in a new location, to take the place of those whose time is expired, being satisfied that a 'rotation of crops' is necessary in horticulture as well as agriculture.

By practicing steadily on these rules, we have now for 13 or 14 years *never failed*, I think, of a fine and abundant crop of *large* raspberries. The variety is, I think, the "red Antwerp." *A New Subscriber. Philadelphia, 6th mo.* 24, 1848.

[Good advice; and especially the necessity of making the soil *deep*.—ED.]

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POMOLOGICAL CONVENTION IN NEW-YORK.—*Respected Friend:* I have noticed, with pleasure, the suggestion for a general fruit convention, to be held in New-York city next autumn. Permit me, however, to propose an alteration in the *time*. Would not the 20th to the 25th of 9th mo. (September) be a decided improvement, all things being borne in mind? Autumn apples would then be sufficiently matured, as well as a large part of autumn pears; a large portion of the later peaches would be in condition for exhibition, and the winter apples sufficiently developed to show their distinctive characters, about as well, I should think, as a week or two later. In other words, while it would afford an opportunity to compare some of the late summer and early autumn fruits, which ripen quickly, and as quickly disappear, it would give nearly an equal chance for winter fruits, which ripen more slowly, and to which a week or two would be a matter of less consequence. If New-Jersey and Pennsylvania only were taken into consideration, perhaps the proposed time need not be changed; but as there would doubtless be considerable contributions from New-England and from Eastern and Western New-York, I think the 25th of 9th mo. would be as late as would be desirable.

Permit me to inquire, if the Easter Beurré is undoubtedly identical with the Doyenné d'Hiver? A tree of the latter was procured by Ex-Governor Throop, when he was in France a few years ago; and on comparing the fruit last winter, side by side with Easter Beurré, while there was no perceptible difference in *flavor and quality*, the Doyenné d'Hiver was different in form from any specimens of Easter Beurré I had seen, having a small distinct *neck* or taper to the stalk, like the Glout Morceau, and was *very regular* in shape. Very respectfully, *J. J. Thomas. Macedon, N. Y., 6mo.* 19, 1848.

[We understand that a conference is going on between the Massachusetts and Pennsylvania Horticultural Societies, and the American Institute, respecting the time and place of holding a great Pomological Convention, which has been in contemplation for some time. Both Mr. HANCOCK'S and Mr. THOMAS' suggestions will, no doubt,

along with many others, receive consideration. We shall probably be able to announce the time fixed in our next number. Ed.]

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The Character of the Strawberry.—*Mr. Downing:* Your correspondent, (Dr. Valk) in the last Horticulturist, attempts to set this question at rest: but makes, I think, quite a mistake by referring to accidental causes, facts which belong to fixed laws. In the last clause of his article he says that, "the dicœcious character of some species and of all varieties, is the result of accident, rather than fixed laws." From a long and careful investigation of this question, in which a great number of species and varieties has come under my observation, for, besides having access to the extensive collections in the nurseries, I cultivate from two to three acres of the most approved kinds, I have deduced the following facts or laws:

1. Whether plants growing wild or those raised from seed be examined, there will generally be found some *hermaphrodite*, that is with both *pistils* and *stamens* developed: and others *pistillate*, or having no perfect stamens.

2. These two kinds being increased by runners do not vary their characters.

3. Hermaphrodite plants will bear fruit by themselves, being furnished with both *pistils* and *stamens*, though possessing various degrees of productiveness.

4. *Pistillate* plants will not bear fruit, unless impregnated by others having stamens, but when thus impregnated are usually very productive.

These propositions, which embrace the whole matter at issue, being universally true, must be considered as general and not accidental laws.

It does sometimes happen that a few blossoms of an hermaphrodite plant prove defective in *stamens* or *in pistils*, by abortion, but the general character of the plant is never changed.

In regard to plants perfect in both organs, it may be observed that the *stamens* and *pistils*, in different varieties, bear very variable relations to each other. In some the receptacle is full and perfect, and the fruit sets with some degree of certainty, while in others the receptacle is small or otherwise defective, and the blossom liable to blast.

The above views, or rather facts, are the deductions of experience and observation, and agree, I believe, with those of Mr. Longworth.

After the fruiting season is over I intend to make some remarks upon the comparative value and qualities of many different varieties lately brought into notice. *G. W. Huntsman. Flushing, May 11th*, 1848.

[We shall be glad to receive Mr. Huntsman's further remarks. He is a carful observer. Ed.]

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Cherry Trees at the South.—*Dear Sir:* I noticed your directions, in the very first number of this Journal, to those who had failed in raising the finer varieties at the south. I immediately (Aug. 1846) set about sheathing my trees with straw, extending it some distance up the larger limbs. The next autumn I also made a new plantation of the best tender varieties, putting, as recommended, on the north side of a fence and building.

I think it will be quite a boon to those of us who have hitherto failed with this tree. I already observe a very marked difference between those trees left fully exposed to the climate and those covered with straw—among the old trees; and those planted two years ago are usually green and healthy. I had nearly abandoned the cultivation of all but the Mayduke, and the more common Morellos, owing to the difficulty experienced here, but now hope to cultivate all the best varieties named in your work. Yours, &c. *A. P. Miss., May*, 1848.

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Horticulture at Nashville, Tenn.—As the Horticulturist, among the numerous valuabe and instructive articles with which its pages abound, occasionally informs us of the formation of new horticultural societies, I have been induced to forward a slight and imperpect sketch of the commencement and progress of our association, (the *Nashville Horticultural Society;*) and as the plan adopted differs, in many particulars, from any other society I have seen described, the following details may not, perhaps, be devoid of interest:

An attempt to form a society for the encouragement of rural pursuits, and for the improvement of the culture of fruits, flowers, &c. was announced in the year 1844, by a few individuals of this city and neighborhood, who organized and established a horticultural society, hoping, by encouraging exhibitions and awarding premiums, to arouse something of that spirit and enterprising improvement so apparent in the more northern and eastern states; but in consequence of the indifference manifested by those engaged in the culture of the soil, the society met with very indifferent success. It then became evident that a course must be pursued which would exhibit the advantages derivable from such associations in a clearer light.

To effect this purpose, the society obtained of the State Legislature a charter, enabling it to hold property, as a corporate body. A stock book was opened for subscriptions of shares, at fifty dollars each, and the constitution remodelled, making it obligatory for each member to be owner of at least one share of stock. A sufficient amount having been subscribed, the society purchased a beautiful lot of ground within one mile of the city, which is arranged so as to form a *nursery*, into which are being introduced the finest varieties of trees, fruits and flowers, and the remaining portion appropriated as a pleasure garden and grounds. This is now the resort of members, their families, and visiters invited by them. The green-house was completed and stocked with plants last autumn, and others are in progress. A cottage, in the rural or English gothic style, has been built, in the construction of which your works were advantageously consulted. The cottage contains three rooms, for the gardener's accommodation, and devoted to a library and the reception of those visiting the garden. The society will be obliged, for some time, to dispose of a sufficient amount of plants and fruit trees to meet, (with a small annual subscription,) the current expenditure; but we hope, ere long, our more wealthy citizens may be impressed with some portion of that intelligent taste and energy which are, in the Eastern States, converting even their bleak coasts into fruitful gardens. Such a

spirit would enable the society to become in reality an association for the acquisition and diffusion of horticultural knowledge. I remain, very respectfully, your obedient servant. *William Prichard.*
Nashville, May 30, 1848.

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A WORD FOR BOTANISTS ON THE "GREAT STRAWBERRY QUESTION.—This subject is getting to be nearly as *prolific* in disputes as the plants themselves are in berries—so that, ultimately, they will become as "plenty as blackberries." In the elaborate report of the Cincinnati Horticultural Society, on the strawberry, lately published, poor systematic botanists come in for a full share of reproach on this *fruitful* subject. In their 4th postulate, they say: "That nearly all botanists, (and among them our most enlightened modern writers,) have overlooked the important error of Linnæus, and have simply copied after him, without verifying for themselves," &c. Now this unmerited taunt is severe, because "enlightened botanists" do not claim entire exemption from liability to error. Admitting the charge of error and ignorance, on the part of the great Linnæus and enlightened botanists, to be true, is the severity of the taunt deserved, when so much of the progress of Horticulture and Floriculture, is due to the untiring zeal and unrequited industry of the systematic botanist? All the pay that the enlightened botanist expects, for the laborious explorations of the wide fields of truth, in his favorite branch of investigation, is the consciousness of adding his mite to the general stock of science, and the promotion of the cause of truth. That he may commit errors, or that his investigations may be unsatisfactory, for want of opportunities of carrying them on successfully, is conceding to them no more than is incident to the fallibility of all human speculations. Unfortunately for the theory, (for it is nothing but a theory,) of these visionary men, LINNÆUS and his humble followers are not mistaken, nor in error, with regard to this peculiarity of the plant in question. It is not a *diœcious* plant in a state of nature, (the only question upon which the botanist is called upon to decide,) and, so far as my observations extend, it is not so with the cultivated varieties. Metamorphoses of vegetables, from peculiar habits and cultivation, take place so readily, that botanists have long since ceased to depend on cultivated specimens as types for description, as being too uncertain and variable for scientific purposes. Prof. GRAY, who is the best authority on vegetable organography in this country, holds the following language on this subject: "Separated or *diclinous* flowers are termed *monœcious*, when the staminate and pistillate are both produced by the same individual plant; as in the Indian corn or maize, carex, the birch, the oak, beech, hazel, hickory, &c.; and they are called *diœcious* when borne by different individuals; as in the willow and poplar, in Ceratiola, the hemp, hop, &c. In many cases, while some of the flowers are staminate only, a portion are perfect, the different kinds occurring either on the same or different individuals; as in most palms, in many species of maple, in Veratrum &c. plants with such flowers are said to be *polygamous*." (*Gray's Botanical Text Book, page* 117.) Now the strawberry plant, in a state of nature, and in its cultivated aspects, so far as I have observed, does not exhibit the characteristics of diclinous flowers. I have observed in many plants, both wild and cultivated—and among them Hovey's seedling—a state that Mr. LONGWORTH and his coadjutors call staminate and pistillate. But in every case that I have observed, the pistillates have stamens, though probably not developed sufficiently to perform their associate functions, and hence their infertility; and also in what are called staminates, the pistils are always present, although from some cause their barrenness is probably produced by an undeveloped, an accidental abortion, or a diseased state of the pistilliferous organs. Almost all kinds of fruit are subject to the same accidents, and some varieties more than others, which renders them more or less productive, according as they are more or less affected with this deficiency. One *positive fact* is worth more on scientific, as well as legal questions, than a thousand *negative facts*, and the positive statements of Mr. DOWNING, with regard to the change produced by time and cultvation on his beds of Hovey's seedlings, is worth more to my mind than a cart load of the *reasonings* of the Cincinnati Horticultural Society. Indeed, the manner in which they meet these facts, is evincive that they are aware of the weakness of their position. Listen to them one moment. "This effect of change from productive beds, (of pistillates,) to unproductive beds of 'blind plants.' may be readily accounted for in several ways: admitting that the bed was originally composed of the runners from one individual plant of a pistillate variety, we all know that some berries will be left upon the ground, when the seeds germinate and are likely to produce staminate plants."

The "*admission*" that they require, is refuted by the positive fact recorded by Mr. DOWNING, and their fine spun theory is necessarily demolished. Their "ifs and ands," and "may bes," therefore, must fall to the ground. They are careful to impress upon us the idea that there are "*several*" ways of accounting for the results of Mr. DOWNING's experiments, yet the one above quoted, requiring a fatal admission, is the only one in a long article upon this subject, brought forward to sustain them in their position. Although nature is said to be a master workman, we know that there are many circumstances, occurring in a thousand instances, tending to thwart her in her accustomed operations. There are hundreds of instances, where the seeds of vegetables are blighted from the abortion, either of the stamens or pistils, (and one is as fatal to fertility as the other,) under circumstances which can not readily be accounted for, from the very simple reason that we do not know what they are. Fruits of every kind, are known to drop, some seasons, after they are apparently perfectly set, without our knowing the cause, and consequently not being able to account for the fact. Such is the fact also with the strawberry; some varieties, and seasons, and situations, rendering it more liable to accidents of this kind than others. From a consideration of these and many other circumstances, that might be enumerated, did the limits of your useful Journal allow, it does appear ungenerous, as well as unjust, to charge upon the botanist the errors—if we may so call them—of nature, which is obviously evinced throughout the whole vegetable kingdom. That

the skillful horticulturist can, in many instances, partially amend the defects of nature, is a fact too well established to be controverted, and redounds credit to his sagacity, industry, and perseverance. If the beauties and excellencies of the heart-inspiring art of horticulture were at the stand, at which nature had resigned it into the hands of the scientific artist, it would have been doubtful whether the Cincinnati society had been in existence at this time, to taunt the humble followers of LINNÆUS with ignorance and inattention to the great laws of nature. *J. M. B. Lancaster, May 21st*, 1848.

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THORBURN'S EXOTIC NURSERY—*Sir*—In visiting the Nursery Garden, lately of Messrs. THORBURN, at Astoria, I found a great variety of beautiful plants in bloom, roses in great profusion, and many new and fine sorts of geraniums, punica granata, very showy and worthy of cultivation, as it flowers freely on open walls in England, and only requires protection in severe frost; a great many fine plants of new Fuchsias, which deserve to be cultivated by every amateur: now or next month is a good time to turn them out of pots on a shaded north aspect, in a loamy soil, and they will continue to flower until November. It is to be regretted that this class of plants are not more grown, as nothing is more simple of cultivation, and nothing more graceful than their habit of growth with their beautiful pendulous flowers. I observed a great many fine plants of *Ipomea learii*, which flowers so well in this climate, as also *clianthus puniceus* and *eccremocarpus scaber*, both partially hardy, abundant bloomers, and very pretty, and only require to be known to be appreciated. *A Practical Gardner. New-York, June*, 1848.

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PERPETUAL ROSES.—Many cultivators of this fine new class of roses "waste its sweetness" by allowing it to carry all its blossoms in the month of June. Now to have the perpetual rose fully enjoyed, it should not be allowed to bloom at all in the *rose season*. Roses are so common then that it is not at all prized, while, blooming from midsummer to November, it is highly prized by all persons.

The way I pursue to grow it in perfection, is to *pinch out*, as soon as visible, every blossom-bud that appears at the first crop, say from the middle of May to the middle of June. This reserves all the strength of the plant for the after-bloom; and accordingly I have such clusters of roses in July, August, September and October, as those who have not tried this stopping system can have no idea of. *La Reine, Madame Laffay, Compte de Paris*, and the *Dutchess of Sutherland*, are particularly superb varieties under this treatment. Indeed, they may be recommended as among the best of the perpetuals.

I have adopted, with excellent results, Mr. RIVER'S recommendation of giving the roots of well established roses a good soaking of liquid guano, after they have shed their leaves, say middle of Oct. It greatly promotes their luxuriant growth the next season. Yours. *An Amateur. New-York, June*, 1848.

ANSWERS TO CORRESPONDENTS.

EVERGREENS.—*A new Subscriber*, (Philadelphia.) It is difficult to distinguish the true Norway Spruce, while quite young, from the varieties raised from seed and frequently imported and sold along with it in the nurseries. The true sort, however, may be detected by the practiced eye, and has longer leaves, and a more vigorous habit than the spurious seedlings. Sometimes the White Spruce of this country is found intermixed with seedling Norway Spruces imported from Great Britain. When the Norway Spruce begins to produce cones it is readily distinguished by any person, the latter being peculiarly long and narrow. *R. L.* Evergreens of most kinds are easily propagated by planting them in sand under a bell glass, or covered by a common hot-bed light. They must be partially shaded. For the white Aphis, which infests the young growth of this tree, try sprinkling with whale-oil soap.

GREEN-HOUSE.—*C. D. C.* (Lebanon, Pa.) The best angle for the roof of a green house, in this latitude is 45°; 40° will, however, answer. For a small green house no mode of heating is so simple and economical as the old-fashioned brick flue. When once heated, it retains and gives out warmth for a long time, and the fire usually needs no attention after 10 P. M. Tiles for covering the flues may be had at the Salamander Works, Cannon st., New-York.

RASPBERRIES.—*W.* (Cattskill, N. Y.) The true Red Antwerp is easily known from the spurious one by its large size and peculiarly *conical* or pointed berry. A liberal top-dressing of wood ashes, every autumn or spring, greatly invigorates the plants. The *Fastolf* is very large, but is not so firm, and does not bear carriage so well as the Red Antwerp. Mr. RIVER'S *New Everbearing* is in the country, but will scarcely be offered for sale, except by those importing the coming autumn. We have one plant now in fruit, but the latter not yet mature. See the remarks of a Philadelphia correspondent on the culture of the Raspberry, in a preceding page.

STRAWBERRIES.—*Johnson.* (Baltimore.) New beds may be made as soon as the runners can be obtained with sufficient roots—perhaps immediately with you. *Willey*, (or more properly *Wiley*,) is a pistillate variety, and a very great bearer. The *Large English Scarlet* produces more regular crops than any variety we know. Trench your soil 2½ feet deep, and put it in good condition, and you will find no difficulty in producing abundant crops on your soil.

VINERIES.—*E. D.* Your grapes are probably suffering from the want of sufficient moisture in the border. When a border is, like yours, wholly *inside*, it requires constant attention to keep it sufficiently moist. We would advise you to prepare an additional border on the outside, and provide openings in the front wall for the vines to run

through. Outside borders are much better for cold vineries, in this climate, than those on the inside.

Books.—*A Constant Reader.* Mrs. Loudon's new vol. on "Green-house plants," with colored plates, to match her "Annuals," &c., is just published, and may be had of John Wiley, 161 Broadway, N. Y. The subscription to Van Houttes' "*Flore des Serre,*" is 36 francs. A new edition of Michaux's Forest Trees is, we understand, soon to be published in Philadelphia.

Hedges.—*H. R.* (Pittsburgh.) The best hedge plant for you is probably the Osage Orange. It will be offered in abundance by nurserymen next spring. The Newcastle or Cockspur thorn has an entire leaf, the upper side of which is very glossy. Always cut hedge plants to within 4 or 6 inches of the ground, on planting them.

Fuchsias.—*W. V. P.* Our correspondent has failed from not understanding their habits. They require a damp atmosphere, shaded situation under glass, and should be watered or syringed over the leaves at least once a day. *Fuchsia globosa* is almost the only one that we know that will flower freely in the open border.

Rose bugs.—*An Inquirer.* Nothing better than handpicking and "war to the knife," is yet known as a means of lessening this insect, so troublesome in some parts of the country. Would it not be well for some of our leading Hort. Societies to offer a special premium of $100 for some more speedy method. In a letter just received from Mr. Elliott of Cleveland, we find the following:—"Rose bugs abound with us this season. Shaking the trees just *at night*, over a sheet is the best course I have pursued to prevent their ravages."

Cherries.—*F. R. Elliott.* (Cleveland.) We also think the Elton and Flesh col'd Bigarreau will probably prove identical. The similarity in the fruit has struck us for seasons past, but we are not yet prepared to speak confidently. *W. H.* (Boston.) The most valuable cherry, all things considered, is Downer's late. *Bowyer's Early Heart,* and *Arden's Early Heart,* both prove identical with the old *Early White Heart,* and River's Early Amber, seems from examination of a few specimens, not unlikely to be the same variety. *Belle Magnifique* is a valuable, *very late* cooking cherry.

Plums.—*Williams.* (New-York.) The *Jefferson* is certainly the first of plums. Even the English, slow to believe in American fruits, admit that its flavor equals that of the Green gage. Take up your plum trees in winter, with frozen balls of earth, and move them to a part of your ground where you can make a swine and poultry yard about them. This is the only infallible remedy in a curculio district. The most productive plums in light soil, are *Lombard, Cruger's Scarlet, Smith's Orleans, and White Damson.*

Roses.—*A Novice.* (New Bedford.) You may bud roses immediately. Layers should be made before the middle of July, and the ground covered with moss or straw, to keep it moist, or otherwise watered every evening. *Solfaterre* is now considered by many growers, a finer noisette than *Cloth of Gold.*

*** Correspondents who are *subscribers,* will hereafter find replies to any question on subjects within the scope of this journal, in this department, (unless otherwise requested)—and all queries put in a *brief shape,* and sent to us *free of postage,* shall receive attention.—Ed.

MASSACHUSETTS HORTICULTURAL SOCIETY.

Weekly Exhibitions—May 20th.

FLOWERS.—From M. P. Wilder, a collection of hardy flowering shrubs; among them Carragna Chemhing, Spirea Douttii, (new and fine,) new Ghent Azaleas, several varieties of Lilac and Pæonia arborea papaveracea plena. A large quantity of Noisette, Lamarque and Solfaterre roses; four plants of beautiful Ericas, Azalea indica Gledstanesii, a fine seedling Camellia, &c From *N. J. Becar,* Esq., corresponding member of the society, New-York, a great variety of beautiful Calceolarias, mostly collected by him in Europe; also Pelargoniums. The flowers arrived in excellent condition and were universally admired. From *J. Breck & Co.,* a a great variety of Tulips and other cut flowers. From *A. Bowditch,* beautiful Anemones and other cut flowers; also seven pot plants. From *S. Walker,* fine Ranunculus and other cut flowers. From *Nonantum Vale,* by John Cadness, cut flowers, including fine Tulips, bouquets, and a plant of Calistegia pubescens, a new and beautiful climbing plant, with double rose coloured flowers of the Ipomea or Convolvulus tribe. From *G. C. Crowninshield,* by John Quant, six pot plants, including a fine specimen of Brachycome iberidifolia. From *Winships,* two fine bouquets. From *A. Aspinwall,* a splendid display of roses. From *William Kenrick,* by Miss Russell, cut flowers, including a profusion of Pæonia arborea, a large bouquet and basket of flowers. From *Hovey & Co.,* Pelargoniums. From *James Nugent,* bouquets. From *O. Everett,* a fine plant in bloom of Echinocactus Eyresii. From *J. King,* Dedham, Cereus flagelliformis and Cactus epiphyllum. From *John Kenrick,* a basket of flowers.

AWARD OF PREMIUMS.

Tulips.—For the best 30 dissimilar blooms, to John Cadness, $8. 2d best do., to Joseph Breck & Co., $6. 3d best do., to S. Walker, $3.

Pot Plants.—For the best six plants, to John Quant, $2. 2d best do., to Azel Bowditch, $1.

Wm. Quant, James Nugent, John Quant, Judges on Tulips.

William Quant, James Nugent, W. B. Richards, Judges on Pot plants.

The Committee award to Winships, 1st premium on Parlor Bouquets, $2. A. Bowditch, 2d do., $1.

For the best Vase Bouquet, 1st premium to A. Bowditch, $2. John Cadness, 2d do., $1.

The Committee recommend a gratuity to John Cadness, for a plant of Calistegia pubescens, $3.

To Joseph Breck & Co., for a fine display of Tulips, $3.

They award to N. J. Becar, Esq., the Society's Silver Medal, for a great variety of beautiful Calceolarias

Joseph Breck, Ch'n Flower Committee.

FRUIT.—Grapes from *T. H. Perkins*, by W. Quant, fine specimens of Black Hamburg and Muscat of Alexandria. Also *nine* varieties from *J. F. Allen*, of Salem,—the Black Hamburg and Grizzly Frontignan were well coloured and fine specimens S. WALKER, Ch'n.

VEGETABLES—*T. H Perkins*, by William Quant, very fine Asparagus. *G. C. Crowninshield*, by John Quant, two brace Cucumbers. From *John Hill*. Asparagus and Rhubarb, very fine, presented too late for premium.

A. D. WILLIAMS, Jr., Ch'n.

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Exhibition of May 27th.

FLOWERS.—From M. P. WILDER, Pot Plants: Erica Bowiena; five seedling Azalea indicas, Scarlet, white striped with red, &c., and Azalea indica Gledstanesii. Cut flowers, Tree Pæonies; Grand Duke de Bade, Monstreuosa, alba plenissima, Banksia, Papaveracea, and Reine de Belgique; Rosea superba, and Rococco, new imported varieties from Germany: Rosea superba is very splendid, of a fine deep red colour—the best new variety yet introduced. Also a profusion of hardy Azaleas, double flowering Hawthorns, Pelargoniums, Noisette roses, &c. From *J. L. L. F. Warren*, by John Cadness, Plants of Rhododendron ponticum and Azaleoides, Anigozanthus coccineus, four seedling Cinerarias, and three Calceolarias; also cut flowers, including a variety of fine Tree Pæonies, Rhododendron, Azaleas, Hawthorns, &c. From *A. Aspinwall*, a large collection of fine roses and bouquets. From *E. Wight*, cut flowers. From *Edward S. Rand*, Dedham, a handsome bouquet of indigenous flowers, composed of Arethusa bulbosa, Cypripedium acaule, Sarracenia purpurea, and Convallaria bifolia. From *T. H. Perkins*, by William Quant, six pot plants and two mantle bouquets. From *William Meller*, cut flowers and mantle bouquets. From *J. Breck & Co.*, a great variety of Pæonies and other cut flowers. From *Wm. Kenrick*, by Miss Russell, a great number of Tree and other Pæonies, cut flowers, and one large bouquet. From *John A. Kenrick*, by Miss Kenrick, Wistaria sinensis, hardy Azaleas, double flowering Hawthorns, Pæonies, and other cut flowers. From *Samuel Downer, jr.*, Rhododendrons, hardy Azaleas, &c. From *Parker Barnes*, Pansies, seedling Verbenas, &c. From *E. M. Richards*, Arethusa bulbosa, Sarracenia, &c. From *James Nugent*, one large vase bouquet. From *Azel Bowditch*, fine Anemones, Pinks, and bouquets. From *Hovey & Co.*, Ranunculus, Pansies, Azaleas, 20 varieties, Hawthorns, &c. From *S. Walker*, fine Ranunculus, and other cut flowers. From *Messrs. Winship*, a great variety of cut flowers, including Azaleas, Hawthorn, &c. &c.; also two fine mantle bouquets.

AWARD OF PREMIUMS.

SHRUBBY PÆONIES.—First premium to John Cadness, $5. For the best display to Joseph Breck, $3.

Hardy Azaleas, for the best display to Hovey & Co, $3. 2d best do., to Winships, $2.

Pansies, no premium awarded.

William Quant, John Donald, James Nugent, Judges

BOUQUETS.—For the best vase bouquet, to James Nugent, $2. 2d best do., to A. Bowditch, $1. For the best pair of mantle bouquets, to William Quant, $2. 2d best do., to Winships, $1.

POT PLANTS.—For the best six, to William Quant, $2. 2d best do., to John Cadness, $1.

Alexander McLennan, R. M. Copeland, Joseph Breck, Judges.

The Committee recommend gratuities to Samuel Walker, for display of Ranunculus, $3. To A. Bowditch, for displays of Anemones, $3. JOSEPH BRECK,

Chairman Flower Committee.

VEGETABLES—From *Mrs. Spaulding*, Rhubarb. From *John Cadness*, blanched stalks of Victoria Rhubarb. From *T. H. Perkins*, by William Quant, Victoria Rhubarb—two stalks weighing 3 lbs. 8 oz. From *Mrs. Pratt*, by Alexander McLennan, Victoria Rhubarb—two stalks weighing 3 lbs 4 oz. From *G. C. Crowninshield*, by John Quant, a brace of Cucumbers. A. D. WILLIAMS, Jr., Ch'n.

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Exhibition of June 3d.

FLOWERS.—From M. P. WILDER, Pæonia phœnecia plena and P. rosa superba, (new;) Spirœas, Azaleas, &c. From G. L. Crowninshield, by John Quant, six pot plants. From William Kenrick, by Miss Russell, one large bouquet, Pæonies, and other cut flowers From Joseph Breck & Co., cut flowers in variety. From Nonantum Vale, by John Cadness, cut flowers, including Rhododendrons and other fine plants. Six hand bouquets, &c. From Winships, one pair of mantle bouquets. Double flowering Hawthorns, Azaleas, Pæonies, and a great variety of other cut flowers. From Hovey & Co., twelve plants of Pelargoniums, fine varieties. From O. H. Mathers, by Thomas Needham, a variety of cut flowers From William Meller, two mantle bouquets, and cut flowers From John A. Kenrick, a fine display of Azaleas, Laburnums, and other cut flowers. From James Nugent, beautiful Spirœas, and other cut flowers, and one large vase bouquet. From A. Bowditch, one large vase and four hand bouquets. From M. Tidd, Woburn, a seedling Cactus, a hybrid between Epiphyllum Ackermanii and Cactus Speciossima—a fine plant. From Joseph Stetson, South Canton, a bouquet, composed of indigenous plants.

AWARD OF PREMIUMS.

BOUQUETS—For the best pair of mantle, to William Quant, $2. 2d best do., Winships, $1. For the best vase bouquet, to James Nugent, $2. 2d best do, Azel Bowditch, $1.

John Quant, R. M. Copeland, John Donald, Judges

HAWTHORNS—(Omitted last week) For the best display, to Winships, $3. 2d do, John Kenrick, $2.

POT PLANTS.—For the best six, to John Quant, $2.

JOSEPH BRECK,

Chairman of Flower Committee.

FRUIT.—Apples from Ellwanger and Barry, Rochester, New-York, Northern Spy, very fine specimens. They fully maintained the high character heretofore given to this apple as being the best late keeping apple. Winter Sweet, from J. B. Moore, Concord, by Messrs. Hovey & Co. Grapes from J. F. Allen, Salem, nine varieties; some of the specimens fine. J. S. CABOT, Ch'n.

VEGETABLES.—From Josiah Lovett 2d, Victoria Rhubarb, 12 stalks, 21 lbs.; seedling Rhubarb of 1847, that was superior to any exhibited, 3 stalks, 7 lbs.; seedling Rhubarb of 1848, fine. J. L. L. F. Warren, Victoria Rhubarb. John Kenrick, Victoria Rhubarb; 12 stalks, 18 lbs 4 oz.

A. D. WILLIAMS, Jr., Ch'n.

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Exhibition of June 10th.

FLOWERS—From John Kenrick, a fine assortment of beautiful flowering shrubs, including Azaleas, Laburnums, &c. From Winships, one of the large circular stands filled with a profusion of showy herbaceous and shrubby flowers, and two bouquets From William Kenrick, by Miss Russell, cut flowers in variety, and one large bouquet. From Nonantum Vale, by John Cadness, a variety of cut flowers, bouquets, and eight pot plants, some of them rare and curious. From Wm. Mellar, Bouquets, and cut flowers. From James Nugent, bouquets. From Azel Bowditch, bouquets. From S. Walker, cut flowers From Solon Dike, Stoneham, cut flowers. From John Duncklee, specimens of Liriodendron tulipifera. From Hovey & Co., cut flowers of Beck's Pelargoniums in variety; Pæonia Potsii and other sorts, Rhododendrons, &c. From Breck & Co., cut flowers, as usual.

AWARD OF PREMIUMS.

BOUQUETS.—Vase, 1st prize to James Nugent, $2. 2d do., A. Bowditch, $1. Mantle, 1st prize to Winships, $2. 2d do., Wm. Mellar, $1.

POT PLANTS.—For the best six, to William Quant, $2. 2d do, John Cadness, $1.

The Committee recommend a gratuity to John Cadness, for rare plants, $2. To Miss Russell, for large bouquet, $2.

JOSEPH BRECK,

Chairman of Flower Committee.

FRUIT—From J. F Allen, Grapes—White Frontignan, Black Hamburg, Grizzly Frontignan, fine and well coloured, and Zinfindal; Figs—Black Fig of St. Michael, fine and well ripened. From Nahum Stetson, Bridgewater, Figs—Brunswick, very large. From J. Owen, Boston Pine Strawberries.

D. HAGGERSTON, Ch'n.

VEGETABLES—From J. H. Perkins, by William Quant, Lettuce. From A. D. Williams, Rhubarb.

A. D. WILLIAMS, Jr, Ch'n.

Business meeting, June 3d, 1848. President MARSHALL P.

WILDER in the Chair. A letter was received from Edward Bartlett, Esq, accompanied with seed of the original potatoe, grown in Peru; and it was voted, that the thanks of the Society be presented to Edward Bartlett, Esq., and the seed placed in the hands of the Committee on vegetables, for distribution among the members of the Society.

The subject of holding a festival at the close of the present season, having been discussed, it was voted that the whole subject be referred to the Committee of Arrangements, with instructions to report at the next meeting.

The following gentlemen were elected members of the Society: Mark Healy and Thomas Morgan, Boston; Lyman Kinsley, Canton; John King, Dedham; Henry P. Haven, New Haven, J. W. Brown, Beverly; H. K. Moore, Chelsea; John M. Gourgas, Quincy.

Business meeting, June 17th, 1848. President MARSHALL P. WILDER, in the Chair. Several copies of the report of the committee of the Cincinnati Horticultural Society, on the Strawberry, were received from A. H. Ernst, Esq, and it was voted that the thanks of the Society be presented to Mr. Ernst.

The Com. of arrangements, to whom was referred the subject of a Festival, reported that they recommend the holding of a Festival at the close of the annual exhibition in September next, and that both the Exhibition and Festival should take place in Fanueil Hall, if said edifice can be obtained for this purpose.

Voted, That the President, Vice-Presidents, and Secretaries, be added to the Committee of Arrangements, as a committee to manage all matters pertaining to the Festival

Voted, That the Committee thus constituted, have full power to appoint marshals, and to call in such other aid as they may deem expedient.

Mr. Breck, as chairman of the committee on Flowers, gave notice of the postponement (on account of the lateness of the season,) of the Rose Exhibition until Saturday, the 24th inst.

On motion of Mr. S. Walker, it was voted, that whereas an invitation has been extended to this Society, by the New-York State Agricultural Society, to send delegates to a Pomological Convention to be held in Buffalo in September next, and whereas a call has been made through a public medium, by a member of the Penn. Hort. Society for a similar meeting, and also an application from the American Institute, that such a convention should be holden in the city of New-York in October next, therefore, *Resolved*, that a committee of three, consisting of the President, and two others be appointed by the chair, to correspond with the above named parties, and report at a future meeting, what, in their OPINION, is DESIRABLE to be done in the matter.

The Chair appointed Messrs Secretary Walker, and Eben Wight.

E. C. R. WALKER, *Rec. Sec'y.*

ALBANY AND RENSSELAER HORTICULTURAL SOCIETY.

The Albany and Rensselaer Horticultural Society held their first exhibition for the season in the large room of the Geological Buildings, on Wednesday, the 14th instant, JOEL RATHBONE, Esq, President of the society, in the chair.

The Show was all that the most sanguine friends of horticulture could desire, and the Hall was crowded with ladies and gentlemen during the day.

B. P. JOHNSON,
Secretary.

FRUIT.—The Committee on Fruit reported that there was exhibited—

By Joel Rathbone, of Kenwood. Cincinnati Pine and Virginia Scarlet Strawberries. The Cincinnati Pine is a variety from the west, said to be prolific and hardy, and without being of first character, is a desirable acquisition.

By Volkert P. Douw, of Wolvenhook, Greenbush, Iowa and Ross Phœnix Strawberries.

By Dr. John Wilson, of Bethlehem, White Alpine, early Virginia Scarlet, and Black Prince Strawberries.

By E. P. Prentice, of Mount Hope, Ross Phœnix, Virginia Scarlet, Bishop's Orange, early Scarlet and Hovey's Seedling Strawberries.

By Dr. Herman Wendell, Boston Pine, Iowa, Ross Phœnix and Hovey's Seedling Strawberries; also, foliage, flowers and unripe fruit, of the new and much talked of Aberdeen Beehive; but the plants, having been imported this season, were not sufficiently strong to develop the fruit, so that the committee might be enabled to judge of its true character.

By B. B. Kirtland, of Greenbush, Iowa Strawberries, of beautiful appearance.

By Luther Tucker, of Hope Cottage, Bethlehem, Royal Scarlet,—a fine variety, of beautiful appearance, much resembling the Ross Phœnix, and Stoddart's Washington Alpine Strawberries.

By Jacob Henry, of Watervliet, Early Virginia Scarlet Strawberries.

By E. Wickes, of Albany, Royal Scarlet and Iowa Strawberries; the latter is a variety recently introduced from the west; it is prolific, hardy, agreeable in flavor, large in size, and beautiful in appearance, but will not bear transportation, as it becomes soft, and it does not possess the high flavor of many of the older and favorite varieties.

The committee award the first premium of $2 to Volkert P. Douw, of Greenbush, for beautiful specimens of Ross Phœnix; and the second premium, of $1, to E. P. Prentice, of Mount Hope, for well grown and beautiful specimens of Bishop's Orange, a well known favorite variety.

In coming to a decision as to the merits of the respective varieties, the committee took into consideration the size, flavor and general appearance of the specimens offered for competition.

HERMAN WENDELL,
B. B. KIRTLAND,
WM. BUSWELL.
Committee.

PLANTS AND FLOWERS.—The Committee on Green House Plants and Flowers report that there were exhibited by Joel Rathbone, of Kenwood, Pelargoniums in pots, Bridegroom, Dowager Queen, Victoria, Garth's Perfection, Duchess of Kent, Anson's Superb and Imperial, Fuchsias, Coccinea, Globosa, Fulgens, Venus Victrix, Multiflora, Emeli Perfecti, Passiflora, Loudonii, Stapelia variegata, Burchellea, &c., twelve distinct varieties of Picotee pinks and several varieties of roses; among them were Solfaterre, La Reine, Prince Albert, Rivers, Souvenir de Malmaison. &c. &c.

By V. P. Douw, of Greenbush, several varieties of pansies, eight varieties of Picotee pinks, and a large number of choice roses, a list of which were not handed to the committee.

By Dr Herman Wendell, twenty-five different varieties of roses; among them were Madam Laffay, Gen. Dubourg, Dr. Roques, Prince Albert, Great Western, London Pride, Fulgens, George the 4th, Henry Plantier, Souvenir de Malmaison, Tuscan Palagii, Luxemburgh moss, Cristata moss, Old Blush moss, Persian Yellow, &c. &c; Phloxes Van Houtii, Grato and Suaveolens, Philadelphus multiplex, several varieties of pansies, Paisley pinks, Pæonies, Lady Hume and Roseum fragrans, &c. &c.

By James Wilson, seventy-five varieties of roses; among them were Persian Yellow, Donna Sol, Marjolin, George the 4th, Madam Hardy, Queen Leda, Princess Lamballe, Great Western, La Tour d'Auvergne, Leopold, Washington, London Pride, Nelly, Pompon Bicolor, Cerise Superba, Village Maid, Cristata moss, &c. &c. Twenty varieties of Pansies, three varieties of Daisies, red and white Fraxinella, Clematis erecta and Integrifolia, perennial Indian poppy, Pyretheums, Pæonies, Humii, Fragrans, Potsii, Reevesii, &c.; six varieties of beautiful Rocket Larkspurs, twelve varieties of Verbenas, six varieties of Petunias, Phloxes Maculata, Van Houtii, Suaveolens, and a large and beautiful collection of perennial and biennial flowers.

Charles H. Merritt, of Troy, twelve varieties of roses, viz: White Unique Moss, Cristata Moss, Striped Unique, London Pride, Pink Moss, Madam Hardy, Royal Greatness, Lord Nelson, Lanseseur, Queen of France, &c.; ten varieties of Verbenas, and also a collection of perennial flowers.

Henry Vail, of Ida Farm, Troy, a large collection of beautiful Pæonies.

Wm. H. DeWitt, Albany, Royal Provence, George the 4th. Provence, and York and Lancaster roses; Red Maroon and Sulfurea dahlias; several varieties of Sweet Williams; Canterbury bells, and Pæonia Humii.

E. P. Prentice, of Mount Hope, a number of choice roses, Pæonies and other flowers.

Dr. J. M. Ward, a most splendid specimen of Magnolia Macrophylla, grown on his farm in New Jersey, which elicited much admiration from the visitors at the exhibition.

PREMIUMS.—The Committee awarded the premiums as follows:

Roses—For the best exhibition, to James Wilson, $3. For the best twelve distinct varieties, viz: Persian Yellow, Gen. Foy, Village Maid, Washington, Pompon Bicolor, Cerise Superba, Nelly, Donna Sol, London Pride, Marjolin, La Tour d'Auvergne and Leopold, $2; for the best six distinct varieties, viz: Cristata Moss, Great Western, Leda, Queen, Danviers, Princess Lamballe, $1—both to Jas. Wilson.

Pinks—For the best six distinct varieties to Joel Rathbone, $2. For the best three distinct varieties, to Joel Rathbone, $1.

Pæonies—For the best collection, to V. P. Douw, $2. For the best six varieties, viz: Humii, Fragrans Potsii, Reevesii, Whitlejii, and Alba—to Jas. Wilson, $1.

Pansies—For the best twelve distinct varieties, to Jas. Wilson, $2. For the best six do., to Dr. Herman Wendell, $1.

Fuchsias—For the best six varieties in pots, viz: Fulgens, Venus Victrix, Multiflora, Emile's Perfection, Globosa and Coccinea, to Joel Rathbone, $2.

Annual and Perennial Flowers—For the best display, to Jas. Wilson, $2. For the best six different varieties of plants in pots, to Joel Rathbone, $2.

The Committee also award a gratuity of $1 to Wm. H. DeWitt, for five varieties of beautiful Dahlias.

The Committee cannot close their report without expressing to the society their satisfaction at the beautiful display of choice and rare flowers offered for exhibition, nearly all of which exhibited great skill in their respective growers.

WM. NEWCOMB, Ch'n.
V. P. DOUW,
J. M. LOVETT,
Committee.

FLORAL DESIGNS, BOUQUETS, &c.—The Committee beg leave to report that Dr. Herman Wendell exhibited a large pyramidal floral design, composed of Roses, Pinks, Lilies, Verbenas, &c. &c.; a centre table bouquet, composed of rare Roses, Phloxes, Pinks, Verbenas, &c. &c.; a basket bouquet with handle, composed of rare Rose buds, Pansies, Pinks, Verbenas, Forget-me-nots, &c. &c., on a moss ground, to which the Committee award the premium of $2.

Mr. E. P. Prentice exhibited a large round bouquet for centre table, and composed of Roses, Larkspurs, Pæonies, &c. &c., to which they awarded a discretionary premium of $1.

Mr. Jas. Wilson exhibited a large flat bouquet for mantle vase, composed of Roses, Hydrange, Larkspurs, Pæonies, Honeysuckles, &c.; a flat hand bouquet, composed of Hoyas, Scabious, Epacnis, Camellias, Moss Rose Buds, Pinks, Geraniums, &c., to which the Committee awarded the premium of $1; also a round hand bouquet, composed of about the same varieties, to which the Committee award the premium of $1.

Mr. Joel Rathbone exhibited two beautiful basket bouquets, with handles, composed of Roses, Pinks, &c.; also a large pyramidal floral design.

Mr. D. T. Vail exhibited a large round bouquet for centre table vase, composed of Roses, Pinks, Larkspurs, Calceolarias, &c., to which the Committee awarded the premium of $2.

Mr. Wm. Newcomb exhibited a large flat bouquet for mantle vase, composed of a choice collection of rare and beautiful perennial and biennial flowers, viz: Verbenas, ten varieties; Campanula pyramidalis, Pelargoniums, Carnation and Picotee Pinks, Dianthus Barbatus, Loniceras, Sempervirens, and Flexuosum; six varieties of Roses, viz: Red Moss, Burnet, Nigra, and three other varieties; Delphinums, Elatum, Ceruleum and Grandiflorum, Phloxes, Lilies, Polemoniums, Reptans, Ceruleum, and Album, Hesperis pleno, Lupinus polyphyllus, Silene regia, Aquilegia variegata, Iris germanica, and Lutescens, Robinia, Hispida, and Marophylla, Pæonies, Humii, Whitlejii, and Fragrans, Lychnis flore pleno, &c. &c., to which the Committee awarded the premium of $2.

Mr. John Wilcox exhibited a large floral design, of pyramidal shape, and leaning, (after the manner of the Tower of Pisa,) composed of Roses, Lilies, Pæonies, Larkspurs, Pinks, Campanulas, Valerians, Phloxes, &c. &c., $2.

JOHN B. GALE, Ch'n.
ERASTUS H. PEASE,
ABEL FRENCH,
Committee.

VEGETABLES.—The Committee on Vegetables respectfully report, that although the weather for the past month has been very unfavorable to the growth and ripening of all vegetables in the open air, in this vicinity, there was presented quite a respectable show of a number of varieties of very fine esculents in competition for premiums.

V. P. Douw, of Wolvenhook, Greenbush, exhibited Landreth's early peas, four very beautiful heads of cauliflowers, (these attracted the attention of all visitors,) some fine heads of Lettuce, Turnip Beets, Giant Rhubarb, and three remarkably large Cucumbers, of a variety called the "Roman Emperor."

E. P. Prentice, of Mount Hope, exhibited Cauliflowers, Turnip Beets, Giant and Victoria Rhubarb, (six stalks of the latter weighing four pounds,) Early Racehorse and Prince Albert Peas, White-spine Cucumbers, (very fine,) Early York Cabbage, and some fine heads of Silesian Lettuce.

Dr. Herman Wendell, of Albany, exhibited some of the Hoo-Sung, a new vegetable, lately introduced from China by the London Horticultural Society, and which, Dr. W. informed us, should—after being stripped of its leaves—be cooked and eaten in the same manner as Asparagus, which the stems in some degree resemble. He also exhibited four new varieties of Lettuce, viz: the Artichoke-leaved, the Malta, the Swedish or Sugar, and the Imperial, and some fine stems of Victoria Rhubarb. The Malta was a remarkably bitter variety, but one which the Committee believe, when eaten as a salad prepared with the proper condiments, will be greatly relished by *bon vivants*. The Artichoke-leaved variety is a curious but very agreeable one. So also is the Sugar and Imperial.

The Committee cannot allow the opportunity to pass without calling the attention of the society to these successful attempts of Dr Wendell, to introduce new varieties of vegetables from other countries, as worthy of all praise, and highly honorable to him, as a member of the society, and they would recommend that a discretionary premium be awarded him.

Joel Rathbone, of Kenwood, exhibited Giant Rhubarb, Early York Cabbages, Admiral Lettuce, Early June and Racehorse Peas.

D. Thomas Vail, of Ida Farm, Troy, exhibited some very fine heads of Early York Cabbage.

Jacob Henry, of Watervliet, exhibited some very fine early June Peas.

Frederick Keisel, near the Orphan Asylum, Albany, exhibited early June Peas Turnip Beets, some beautiful heads of Silesian Lettuce, fine double curled Parsley, six heads of fine white Celery, and some white spine Cucumbers.

The Committee recommend that a discretionary premium be allowed Mr. Kiesel for his Parsley, Beets, Cucumbers, and Peas, which were very fine.

James Wilson, of Albany, exhibited six stems of Hybrid Rhubarb, which weighed six pounds.

The Committee have awarded the premiums as follows:

On Beets, to E. P. Prentice, of Mount Hope, $1.

On Cabbage, to D. T. Vail, of Ida Farm, Troy, $1.

On Cauliflowers, to V. P. Douw, of Wolvenhook, Greenbush, $1.

On Celery, to F. Kiesel, of Albany, $1.

On Cucumbers, to V. P. Douw, of Wolvenhook, Greenbush, $1.

On Lettuce, to F. Kiesel, of Albany, $1.

On Peas, to V. P. Douw, of Wolvenhook, Greenbush, $1.

On Rhubarb, to James Wilson, of Albany, $1.

C. N. BEMENT, Ch'n.
ROBERT F. JOHNSTONE,
S. CHEEVER, Committee.

PENNSYLVANIA HORTICULTURAL SOCIETY.

The intermediate meeting of the Society was held on the 6th June, on which occasion there was a good display of fruits, some of which were rare for the season; also show of fine Roses and other flowers.

Premiums were awarded as follows:—For the 12 best Rocket Larkspurs, to Anthony Felton; and special premiums for the best Seedling Pink ever shown before the society, a premium of two dollars, to William Hobson; and for the best exhibition of Garden Roses ever presented, a premium of like amount to the same contributor. The committee noticed some fine specimens of Cacti flowers from the collection of the President, and 2 white Rocket plants from William Hobson.

The committee on fruits awarded the premium for the best Strawberries, 2 qts., (Buist's Prize Seedling,) to Robert Dunk of Pasyunk; for the second best do., (Methven Scarlet,) to Isaac B Baxter; for the best Cherries. 3 pounds, (Mayduke,) to Isaac B. Baxter; for the second best do., (Early Richmond) to William Hobson; and they take pleasure in making favorable mention of seedling strawberries by Isaac B. Baxter and Gerhard Schmitz; also exceedingly high flavored Hautboys, by Anthony Felton, (not 2 qts.) and respectfully recommend a special premium of three dollars for a beautiful display of Black Hamburgh Grapes, Peaches and fine Melons.

The committee on vegetables awarded the premium for the best Turneps, to Anthony Felton The committee noticed a fine display of Sugarloaf lettuce, called "Victoria," and superior early Peas named "Prince Albert," both new varieties, shown by Robert Buist.

Objects Exhibited.—*Flowers*—By William Hobson, superior Roses of varieties; Hybrid Bourbons, Coup de Hebe, Ernst Ferray, Hortense Leroy and Richelieu—Hybrid China, Charles Fouquier, Chenedale. Compte de Lacepede, Triomph de la querre, Cerisite, Reine de Roses, and George 4th. Maid of Brussells, Madame Hardy, Adelaide Moss, Luxembourg Moss, River's Crimson Moss, Celina Moss. Happy Surprise, and La Capricense. Seedling Pinks and White Rockets By Anthony Felton, Double Rocket Larkspurs By B Daniels, gardener to C. Cope, Cut flowers of three cerei (new.)

Fruit—By Isaac B Baxter. Strawberries, Methven Scarlet and Seedling; Cherries, Mayduke.

By B. Daniels. Strawberries of varieties; White and Red Alpine and Lafayette Hautboy; Black Hamburg Grapes; Peaches; Melons, var. Great Cabul, Affghanistan, and Ionian.

By Robert Dunk, Strawberries, Buist's Prize Seedling

By Robert Buist, Buist's Prize Strawberry.

By Gerhard Schmidtz, Strawberries, a seedling for the first time shown, of much merit, a prolific, fine flavored and rich colored variety, which the committee have named "Moyamensing."

By Wm. Hobson, Strawberries, Hovey's Seedling; Cherries, Early Richmond.

By Anthony Felton, Strawberries, Hovey's Seedling and Hautboy.

By Wm. Hall, Strawberries, Methven Scarlet.

Vegetables—By Robert Buist, "Prince Albert" Peas and "Victoria" Lettuce.

By Anthony Felton, Turneps.

Stated Meeting, June 20th, 1848. The President in the chair. There were several fine collections of plants, possessing interest from the beauty, rarity and *newness* of some of the specimens (particulars below) also some excellent fruit and vegetables. Premiums on this occasion were as follows: For the best Hot house plants, for the best Greenhouse plants and for the best collection of plants, to James Bisset, gardener to James Dundas; for the second best Hothouse plants, and for the second best collection of plants, to B. Daniels, gardener to C. Cope; for the second best Greenhouse plants, to Benj. Gullip; for the best bouquet, for the best and for the second best basket of flowers, and best basket of Indigeneous flowers, to Robert Kilvington. And special premiums of two dollars each to B. Daniels and Peter Raabe, for bouquets.

For the best Grapes of a black variety and for the best of a white variety, to Benjamin Daniels, gardener to C. Cope; for the best Cherries, (supposed Elton,) to Col. H. Carr; for the second best and the third best do., to Isaac B. Baxter. And a special premium of three dollars for a dish of exquisite Peaches, to B Daniels, gardener to C. Cope. The Committee notice with much pleasure, a number of new varieties of Raspberries, by our enterprising member Dr. Wm. D. Brinckle, to whom we are indebted for many choice varieties of Seedling Strawberries, etc The committee also called the attention of the Society to some Gooseberries of extraordinary size, by Isaac B. Baxter.

For the best Artichokes, six heads, for the best and for the second best display of vegetables by market gardeners, to Anthony Felton, for the best display of vegetables by Amateur gardeners, to Isaac B. Baxter; for the second best do., B. Daniels, gardener to C. Cope; for the third best do., to Benj. Gullip.

A note to the Secretary, from Prof R. Dunglison, under date 25th ult., was read, purporting that he had received a letter, accompanied with a barrel of Potatoes, from his friend N. P. Trist, which he had procured from the interior of Mexico, and desiring that our Society would immediately distribute; the package being received, was accordingly distributed by the committee for the distributing seeds, etc. On motion, ordered that the thanks of the Society be tendered for a gift so acceptable.

A communication from Col. Wilder, president of the Mass. Hort. Society, to Thomas Hancook, relative to a proposed convention of Pomologists, was read, and a committee appointed on the subject with power to act, consisting of Thomas Hancock, Dr. W. D. Brinckle and D. McEuen.

A letter from Edmund Burke, of the patent office, to Josiah Tatum, Editor Farmer's Cabinet, was read, desiring a co operation of the Society in obtaining the statistics of fruit from our markets. On motion, ordered that the subject be referred to the committee on fruits.

Members elected.—Pierce Butler, Geo. A. Wood, Jesse Cole and Robert Scott; also Mrs. Edwin James, Petersburgh, Va., to honorary membership.

Objects Exhibited—*Plants* by Robert Buist, *not in competition*, White Phlox Drummondii, *new*, Petunia General Taylor a fine plant, Pavetta Caffra, in handsome flower, Erica gracilis, Maxillaria sp., Mimulus cardinalis, 3 *feet high and* 2 *feet wide*, Gardenia camelliæflora, Columnea schediana, Gloxiana rubra and Phlox charles.

By James Bissett, gardener to James Dundas, Columnea Roxburghii, *new*, the first time shown before the Society, Pholodotta imbricata, Oncidium papilio, Cattleya Forbesii, Cypripedium venustum, Achimenes grandiflora, G. picta, Gloxinia speciosa, G. Candida. Lilium longiflorum, Gardenier florida, Plumbago rosea, and Gesneria micans.

By B. Daniels, gardener to C. Cope, Nandina domestica, Ceropegia Stapeliæformis, Gongora purpurea, Tweedia cærubræ, Asclepias currasavi a, Roella splendens, Gardenia florida, Echinocactus Eyriesii, E. oxogonus, Lantana rosea, Amaryllis and Petunias.

By B. Gulliss, Hoya carnosa, a fine specimen Begonia maculata, and Euphorbia splendens.

Bouquets—By Robert Kilvington, Peter Raabe and B. Daniels.

Fruit.—By B Daniels, gardener to C. Cope, Grapes, Black Hamburgh, and Austrian Muscat, Royal George Peaches.

By Col Robert Carr, Cherries, supposed Elton.

By Isaac B. Baxter, Cherries, 2 varieties, Gooseberries, Currants.

By Dr. W. D. Brinckle, Raspberries, specimens of the Col. Wilder, a cream-color, Orange, Cushing, a crimson and Fastolf; Strawberries, Black Prince, No. 285, F. and Buist.

Vegetables.—By Anthony Felton, two fine tables in great variety.

By Benj. Daniels, gardener to C. Cope, Cucumbers, Beets, Corn, Radishes, etc.

By Benj. Gulliss, Peas, Beans, Etc.

Thos. P. James, Rec. Sec.

Hort. August. 1845.